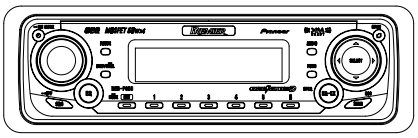
Pioneer *sound.vision.soul*

Service Manual



DEH-P650/XN/UC

ORDER NO.
CRT3011

MULTI-CD CONTROL HIGH POWER CD PLAYER WITH FM/AM TUNER

DEH-P650 XN/UC
DEH-P6500 XN/UC
DEH-P6550 XN/ES

COMPACT disc DIGITAL AUDIO

● This service manual should be used together with the following manual(s):

Model No.	Order No.	Mech. Module	Remarks
CX-3026	CRT2944	S10	CD Mech. Module:Circuit Description, Mech.Description, Disassembly

For details, refer to "Important symbols for good services".

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K-ZZS. DEC. 2002 Printed in Japan

SAFETY INFORMATION

CAUTION

This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer.
Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.
Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING

This product contains lead in solder and certain electrical parts contain chemicals which are known to the state of California to cause cancer, birth defects or other reproductive harm.
Health & Safety Code Section 25249.6 - Proposition 65

● CD section precaution

1. Before disassembling the unit, be sure to turn off the power. Unplugging and plugging the connectors during power-on mode may damage the ICs inside the unit.
2. To protect the pickup unit from electrostatic discharge during servicing, take an appropriate treatment (shorting-solder) by referring to "the DISASSEMBLY" on page 58.
3. After replacing the pickup unit, be sure to check the grating. (See p.54.)

[Important symbols for good services]
In this manual, the symbols shown-below indicate that adjustments, settings or cleaning should be made securely.
When you find the procedures bearing any of the symbols, be sure to fulfill them:

1. Product safety

You should conform to the regulations governing the product (safety, radio and noise, and other regulations), and should keep the safety during servicing by following the safety instructions described in this manual.

2. Adjustments

To keep the original performances of the product, optimum adjustments or specification confirmation is indispensable. In accordance with the procedures or instructions described in this manual, adjustments should be performed.

3. Cleaning

For optical pickups, tape-deck heads, lenses and mirrors used in projection monitors, and other parts requiring cleaning, proper cleaning should be performed to restore their performances.

4. Shipping mode and shipping screws

To protect the product from damages or failures that may be caused during transit, the shipping mode should be set or the shipping screws should be installed before shipping out in accordance with this manual, if necessary.

5. Lubricants, glues, and replacement parts

Appropriately applying grease or glue can maintain the product performances. But improper lubrication or applying glue may lead to failures or troubles in the product. By following the instructions in this manual, be sure to apply the prescribed grease or glue to proper portions by the appropriate amount.For replacement parts or tools, the prescribed ones should be used.

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1. SPECIFICATIONS

● DEH-P650/XN/UC, P6500/XN/UC

General

Power source ..... 14.4 V DC (10.8 – 15.1 V allowable)
Grounding system ..... Negative type
Max. current consumption ..... 10.0 A
Dimensions (W × H × D):
- DIN
  - Chassis ..... 178 × 50 × 157 mm (7 × 2 × 6-1/8 in.)
  - Nose ..... 188 × 58 × 20 mm (7-3/8 × 2-1/4 × 3/4 in.)
- D
  - Chassis ..... 178 × 50 × 162 mm (7 × 2 × 6-3/8 in.)
  - Nose ..... 170 × 46 × 15 mm (6-3/4 × 1-3/4 × 5/8 in.)

Weight ..... 1.4 kg (3.1 lbs)
Backup current..... 5 mA or less

Audio

Continuous power output is 22 W per channel minimum into 4 ohms, both channels driven 50 to 15,000 Hz with no more than 5% THD.
Maximum power output ..... 50 W × 4
50 W × 2/4 Ω + 70 W × 1/2 Ω (for subwoofer)
Load impedance ..... 4 Ω (4 – 8 Ω [2 Ω for 1 ch] allowable)
Preout max output level/output impedance ..... 2.2 V/1 kΩ
Equalizer (3-Band Parametric Equalizer):
- Low
  - Frequency ..... 40/80/100/160 Hz
  - Q Factor ..... 0.35/0.59/0.95/1.15 (+6 dB when boosted)
  - Gain ..... ±12dB
- Mid
  - Frequency ..... 200/500/1k/2k Hz
  - Q Factor ..... 0.35/0.59/0.95/1.15 (+6 dB when boosted)
  - Gain ..... ±12dB
- High
  - Frequency ..... 3.15k/8k/10k/12.5k Hz
  - Q Factor ..... 0.35/0.59/0.95/1.15 (+6 dB when boosted)
  - Gain ..... ±12dB

Loudness contour
- Low ..... +3.5 dB (100 Hz), +3 dB (10 kHz)
- Mid ..... +10 dB (100 Hz), +6.5 dB (10 kHz)
- High ..... +11 dB (100 Hz), +11 dB (10 kHz) (volume: –30 dB)

Tone controls:
- Bass
  - Frequency ..... 40/63/100/160 Hz
  - Gain ..... ±12dB
- Treble
  - Frequency ..... 2.5k/4k/6.3k/10k Hz
  - Gain ..... ±12dB

HPF:
- Frequency ..... 50/80/125 Hz
- Slope ..... –12 dB/oct

Subwoofer:
- Frequency ..... 50/80/125 Hz
- Slope ..... –18 dB/oct
- Gain ..... ±12dB
- Phase ..... Normal/Reverse

CD player

System ..... Compact disc audio system
Usable discs ..... Compact disc
Signal format:
- Sampling frequency ..... 44.1 kHz
- Number of quantization bits ..... 16; linear

Frequency characteristics ..... 5 – 20,000 Hz (±1 dB)
Signal-to-noise ratio ..... 94 dB (1 kHz) (IHF-A network)
Dynamic range ..... 92 dB (1 kHz)
Number of channels ..... 2 (stereo)

FM tuner

Frequency range ..... 87.9 – 107.9 MHz
Usable sensitivity ..... 8 dBf (0.7 μV/75 Ω, mono, S/N: 30 dB)
50 dB quieting sensitivity ..... 10 dBf (0.9 μV/75 Ω, mono)
Signal-to-noise ratio ..... 75 dB (IHF-A network)
Distortion ..... 0.3 % (at 65 dBf, 1 kHz, stereo)
0.1 % (at 65 dBf, 1 kHz, mono)
Frequency response ..... 30 – 15,000 Hz (±3 dB)
Stereo separation ..... 45 dB (at 65 dBf, 1 kHz)
Selectivity ..... 80 dB (±200 kHz)
Three-signal intermodulation (desired signal level) ..... 30 dBf (two undesired signal level: 100 dBf)

AM tuner

Frequency range ..... 530 – 1,710 kHz (10 kHz)
Usable sensitivity ..... 18 μV (S/N: 20 dB)
Signal-to-noise ratio ..... 65 dB (IHF-A network)

Note

Specifications and the design are subject to possible modifications without notice due to improvements. ▣

● DEH-P6550/XN/ES

General

Rated power source ..... 14.4 V DC
(allowable voltage range: 12.0 – 14.4 V DC)
Grounding system ..... Negative type
Max. current consumption
..... 10.0 A
Dimensions (W × H × D):
DIN
Chassis ..... 178 × 50 × 157 mm
Nose ..... 188 × 58 × 20 mm
D
Chassis ..... 178 × 50 × 162 mm
Nose ..... 170 × 46 × 15 mm
Weight ..... 1.4 kg
Backup current.....5 mA or less

Audio

Continuous power output is 22 W per channel minimum into 4 ohms, both channels driven 50 to 15,000 Hz with no more than 5% THD.
Maximum power output ..... 50 W × 4
50 W × 2/4 Ω + 70 W × 1/2 Ω (for subwoofer)
Load impedance ..... 4 Ω (4 – 8 Ω [2 Ω for 1 ch] allowable)
Preout max output level/output impedance
..... 2.2 V/1 kΩ
Equalizer (3-Band Parametric Equalizer):
Low
Frequency ..... 40/80/100/160 Hz
Q Factor ..... 0.35/0.59/0.95/1.15 (+6 dB when boosted)
Gain ..... ±12dB
Mid
Frequency ..... 200/500/1k/2k Hz
Q Factor ..... 0.35/0.59/0.95/1.15 (+6 dB when boosted)
Gain ..... ±12dB
High
Frequency ..... 3.15k/8k/10k/12.5k Hz
Q Factor ..... 0.35/0.59/0.95/1.15 (+6 dB when boosted)
Gain ..... ±12dB
Loudness contour
Low ..... +3.5 dB (100 Hz), +3 dB (10 kHz)
Mid ..... +10 dB (100 Hz), +6.5 dB (10 kHz)
High ..... +11 dB (100 Hz), +11 dB (10 kHz)
(volume: –30 dB)
Tone controls:
Bass
Frequency ..... 40/63/100/160 Hz
Gain ..... ±12dB
Treble
Frequency ..... 2.5k/4k/6.3k/10k Hz
Gain ..... ±12dB
HPF:
Frequency ..... 50/80/125 Hz
Slope ..... –12 dB/oct
Subwoofer:
Frequency ..... 50/80/125 Hz
Slope ..... –18 dB/oct
Gain ..... ±12dB
Phase ..... Normal/Reverse

CD player

System ..... Compact disc audio system
Usable discs ..... Compact disc
Signal format:
Sampling frequency ..... 44.1 kHz
Number of quantization bits
..... 16; linear
Frequency characteristics ... 5 – 20,000 Hz (±1 dB)
Signal-to-noise ratio ..... 94 dB (1 kHz) (IEC-A network)
Dynamic range ..... 92 dB (1 kHz)
Number of channels ..... 2 (stereo)

FM tuner

Frequency range ..... 87.5 – 108.0 MHz
Usable sensitivity ..... 8 dBf (0.7 μV/75 Ω, mono, S/N: 30 dB)
50 dB quieting sensitivity ..... 10 dBf (0.9 μV/75 Ω, mono)
Signal-to-noise ratio ..... 75 dB (IEC-A network)
Distortion ..... 0.3 % (at 65 dBf, 1 kHz, stereo)
0.1 % (at 65 dBf, 1 kHz, mono)
Frequency response ..... 30 – 15,000 Hz (±3 dB)
Stereo separation ..... 45 dB (at 65 dBf, 1 kHz)

AM tuner

Frequency range ..... 531 – 1,602 kHz (9 kHz)
530 – 1,640 kHz (10 kHz)
Usable sensitivity ..... 18 μV (S/N: 20 dB)
Signal-to-noise ratio ..... 65 dB (IEC-A network)

Infrared remote control

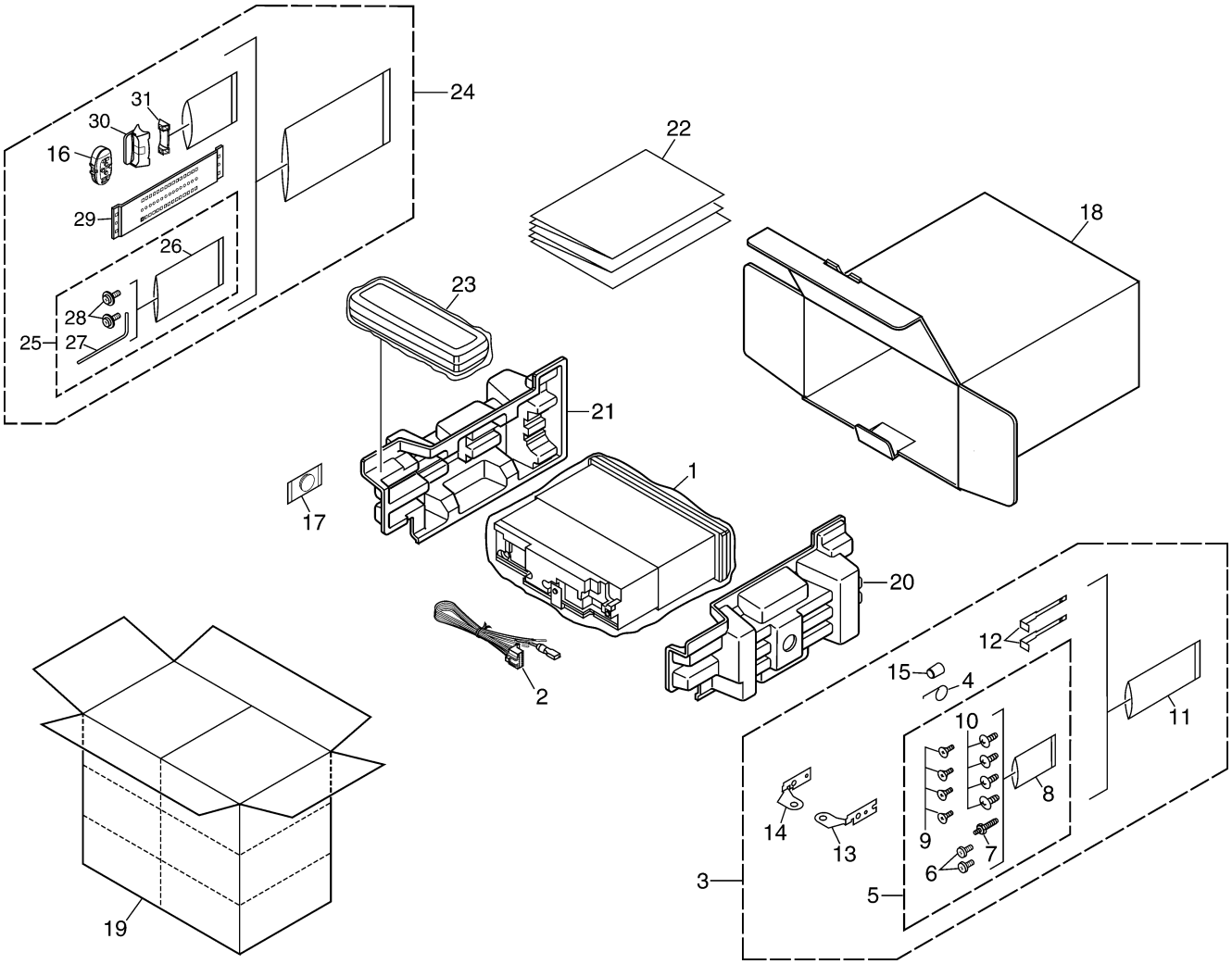
Wavelength ..... 940 nm ±50 nm
Output ..... typ; 12 mw/sr per Infrared LED

Note

Specifications and the design are subject to possible modifications without notice due to improvements. ▣

2. EXPLODED VIEWS AND PARTS LIST

2.1 PACKING(DEH-P650/XN/UC)



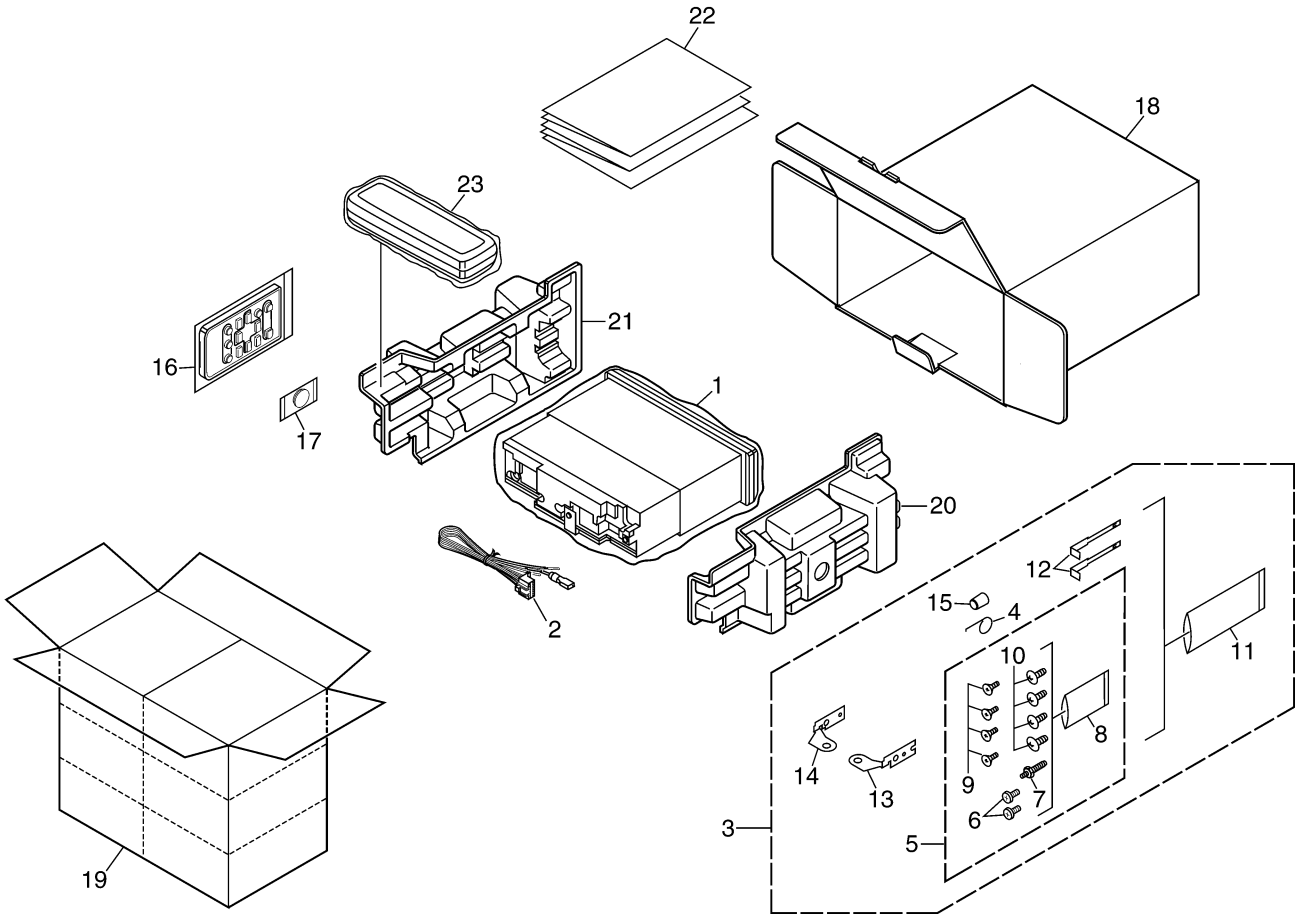
NOTE:

- Parts marked by "*" are generally unavailable because they are not in our Master Spare Parts List.
- Screws adjacent to ∇ mark on the product are used for disassembly.
- For the applying amount of lubricants or glue, follow the instructions in this manual.
  (In the case of no amount instructions, apply as you think it appropriate.)

● PACKING(DEH-P650/XN/UC) SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	Polyethylene Bag	CEG1173
	2	Cord Assy	CDE7154
	3	Accessory Assy	CEA3376
	4	Spring	CBH1650
	5	Screw Assy	CEA3445
	6	Fixing Screw	BPZ20P060FZK
	7	Screw	CBA1002
*	8	Polyethylene Bag	CEG-127
	9	Screw	CRZ50P090FTC
	10	Screw	TRZ50P080FTC
*	11	Polyethylene Bag	CEG-158
	12	Handle	CNC5395
	13	Holder	CND1249
	14	Holder	CND1250
	15	Bush	CNV3930
	16	Remote Control Assy	CZX3257
*	17	Battery	CEX1030
	18	Carton	CHG4947
	19	Contain Box	CHL4947
	20	Protector	CHP2663
	21	Protector	CHP2664
	22-1	Owner's Manual (English, Spanish)	CRD3708
	22-2	Installation Manual (English, Spanish)	CRD3709
*	22-3	Warranty Card	CRY1070
*	22-4	Caution Card	CRP1207
	23	Case Assy	CXB3520
	24	Remote Control Assy	CXB9202
	25	Screw Assy	CZE3169
*	26	Polyethylene Bag	CEG-127
*	27	Hexagonal Wrench	CZE3176
*	28	Screw	RMZ30H060FBK
	29	Belt	CZN7661
	30	Holder Assy	CZX3172
	31	Holder Assy	CZX3173

2.2 PACKING(DEH-P6500/XN/UC, P6550/XN/ES)



(1) PACKING(DEH-P6500/XN/UC, P6550/XN/ES) SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	Polyethylene Bag	See Contrast table(2)
	2	Cord Assy	CDE7154
	3	Accessory Assy	See Contrast table(2)
	4	Spring	CBH1650
	5	Screw Assy	See Contrast table(2)
	6	Fixing Screw	See Contrast table(2)
	7	Screw	CBA1002
*	8	Polyethylene Bag	CEG-127
	9	Screw	CRZ50P090FTC
	10	Screw	TRZ50P080FTC
*	11	Polyethylene Bag	CEG-158
	12	Handle	CNC5395
	13	Holder	See Contrast table(2)
	14	Holder	See Contrast table(2)
	15	Bush	CNV3930
	16	Remote Control Unit	CXC1265
*	17	Battery	CEX1065
	18	Carton	See Contrast table(2)
	19	Contain Box	See Contrast table(2)
	20	Protector	CHP2663
	21	Protector	CHP2664
	22-1	Owner's Manual	See Contrast table(2)
	22-2	Installation Manual	See Contrast table(2)
*	22-3	Caution Card	See Contrast table(2)
*	22-4	Card	See Contrast table(2)
	22-5	Owner's Manual	See Contrast table(2)
*	22-6	Caution Card	CRP1207
	23	Case Assy	CXB3520

(2) CONTRAST TABLE

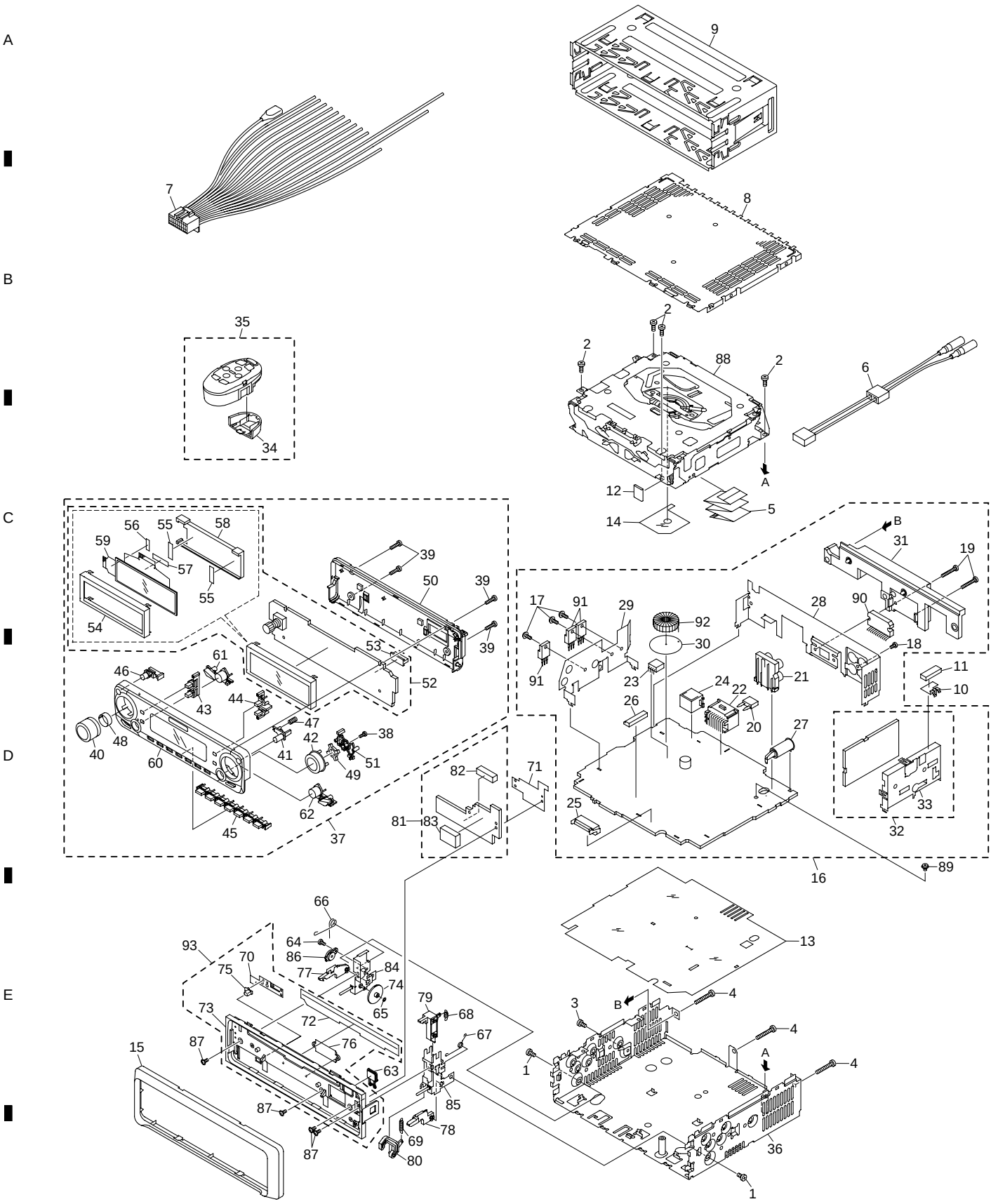
DEH-P6500/XN/UC and DEH-P6550/XN/ES are constructed the same except for the following:

Mark	No.	Symbol and Description	Part No. DEH-P6500/XN/UC	Part No. DEH-P6550/XN/ES
	1	Polyethylene Bag	CEG1173	CEG-162
	3	Accessory Assy	CEA3376	CEA3439
	5	Screw Assy	CEA3445	CEA3437
	6	Fixing Screw	BPZ20P060FZK	Not used
	13	Holder	CND1249	Not used
	14	Holder	CND1250	Not used
	18	Carton	CHG4948	CHG4949
	19	Contain Box	CHL4948	CHL4949
	22-1	Owner's Manual	CRD3710	CRD3712
	22-2	Installation Manual	CRD3711	CRD3714
*	22-3	Caution Card	CRP1294	CRP1216
*	22-4	Card	ARY1048	Not used
	22-5	Owner's Manual	Not used	CRD3713

● Owner's Manual, Installation Manual

Model	Part No.	Language
DEH-P6500/XN/UC	CRD3710	English, Spanish
	CRD3711	English, Spanish
DEH-P6550/XN/ES	CRD3712	English, Spanish, Portuguese(B)
	CRD3713	Traditional chinese, Arabic
	CRD3714	English, Spanish, Portuguese(B), Traditional chinese, Arabic

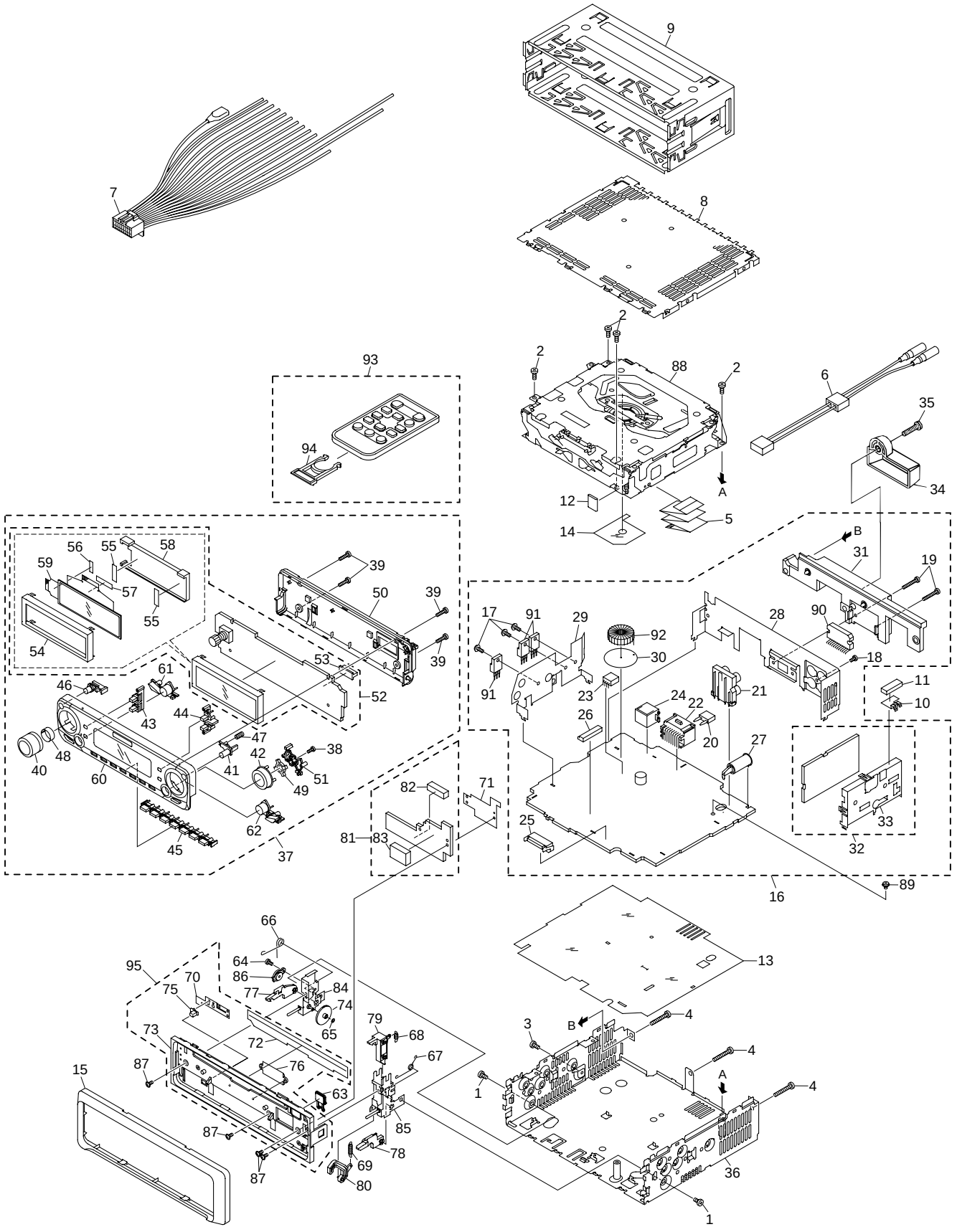
2.3 EXTERIOR(DEH-P650/XN/UC)



● EXTERIOR(DEH-P650/XN/UC) SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	Screw	BMZ30P040FZK
	2	Screw	BSZ26P060FTC
	3	Screw	BSZ30P060FTC
	4	Screw	BSZ30P200FTC
	5	Cable	CDE7128
	6	Cord Assy	CDE7129
	7	Cord Assy	CDE7154
	8	Case	CNB2793
	9	Holder	CNC8659
	10	Earth Plate	CNC8915
	11	Cushion	CNM4870
	12	Insulator	CNM7682
	13	Insulator	CNM7935
	14	Insulator	CNM8174
	15	Panel	CNS6935
	16	Tuner Amp Unit	CWM8598
	17	Screw	ASZ26P060FTC
	18	Screw	BPZ26P080FTC
	19	Screw	BSZ26P160FTC
	20	Fuse(10A)	CEK1208
	21	Pin Jack(CN352)	CKB1051
	22	Plug(CN901)	CKM1376
	23	Plug(CN351)	CKS1238
	24	Connector(CN101)	CKS3408
	25	Plug(CN801)	CKS3537
	26	Connector(CN651)	CKS3835
	27	Antenna Jack(CN401)	CKX1056
	28	Holder	CND1239
	29	Holder	CND1352
	30	Insulator	CNM8245
	31	Heat Sink	CNR1668
	32	FM/AM Tuner Unit	CWE1646
	33	Holder	CND1054
	34	Cover	CZN7655
	35	Remote Control Assy	CZX3257
	36	Chassis Unit	CXB9528
	37	Detach Grille Assy	CXB9682
	38	Screw	BPZ20P060FTC
	39	Screw	BPZ20P100FZK
	40	Knob(VOLUME)	CAA2755
	41	Button(OPEN)	CAC7728
	42	Button(SELECT)	CAC7733
	43	Button(PAUSE)	CAC7737
	44	Button(AUDIO/FUNC)	CAC7738
	45	Button	CAC7750
	46	Button(CLOCK)	CAC7751
	47	Spring	CBH2654
	48	Spring	CBL1470
	49	Cushion	CNM8291
	50	Cover	CNS7247
	51	Holder	CNV7405
	52	Keyboard Unit	CWM8604
	53	Connector(CN1901)	CKS4524
	54	Holder	CND1354
	55	Cushion	CNM6633
	56	Spacer	CNM7697
	57	Spacer	CNM7698
	58	Holder	CNV6910
	59	OEL Unit	MXS8045
	60	Grille Unit	CXB9495
	61	Button Unit(EQ,SRC)	CXB9924
	62	Button Unit(EQ-EX,BAND)	CXB9925
	63	Button	CAC7752
	64	Screw(M2x2)	CBA1176
	65	Washer	CBF1038
	66	Spring	CBH2650
	67	Spring	CBH2651
	68	Spring	CBH2652
	69	Spring	CBH2653
	70	Spring	CBL1512
	71	Holder	CND1254
	72	Cover	CNM6854
	73	Panel	CNS7245
	74	Gear	CNV5997
	75	Pin	CNV6486
	76	Lighting Conductor	CNV6487
	77	Arm	CNV7400
	78	Arm	CNV7401
	79	Arm	CNV7402
	80	Arm	CNV7403
	81	Panel Unit	CWM8758
	82	Socket(CN1950)	CKS3550
	83	Connector(CN1951)	CKS4462
	84	Holder Unit	CXB9501
	85	Holder Unit	CXB9502
	86	Damper Unit	CXB9503
	87	Screw	IMS20P045FZK
	88	CD Mechanism Module(S10)	CXK5600
	89	Screw	ISS26P055FTC
	90	IC(IC301)	PAL007A
	91	Transistor(Q651,911,921)	2SD2396
	92	Choke Coil(L301)	CTH1280
	93	Panel Unit(Service)	CXX1691

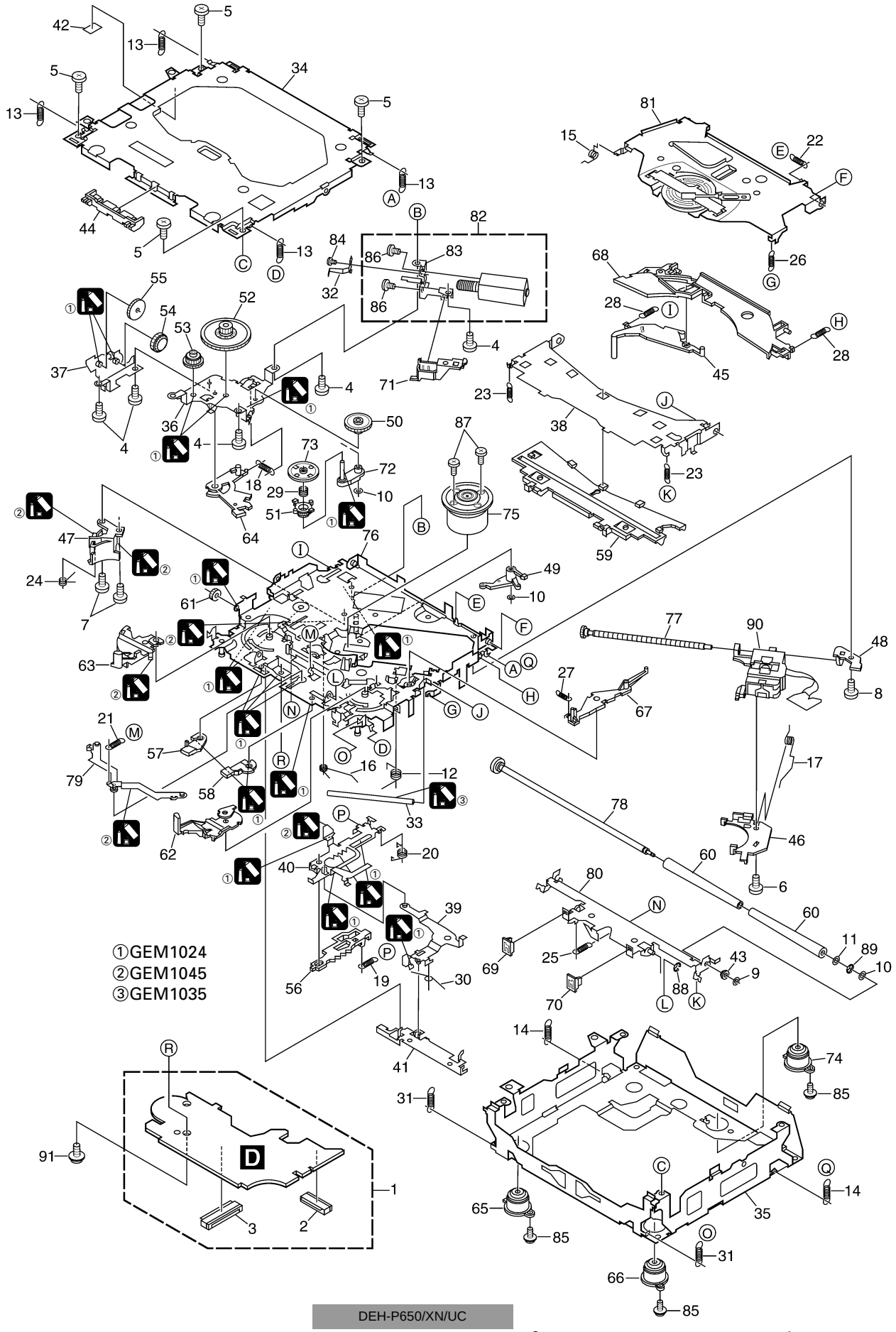
2.3 EXTERIOR(DEH-P6500/XN/UC, P6550/XN/ES)



● EXTERIOR(DEH-P650/XN/UC, P6550/XN/ES) SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	Screw	BMZ30P040FZK
	2	Screw	BSZ26P060FTC
	3	Screw	BSZ30P060FTC
	4	Screw	BSZ30P200FTC
	5	Cable	CDE7128
	6	Cord Assy	CDE7129
	7	Cord Assy	CDE7154
	8	Case	CNB2793
	9	Holder	CNC8659
	10	Earth Plate	CNC8915
	11	Cushion	CNM4870
	12	Insulator	CNM7682
	13	Insulator	CNM7935
	14	Insulator	CNM8174
	15	Panel(DEH-P6500)	CNS6934
		Panel(DEH-P6550)	CNS6935
	16	Tuner Amp Unit(DEH-P6500)	CWM8599
		Tuner Amp Unit(DEH-P6550)	CWM8601
	17	Screw	ASZ26P060FTC
	18	Screw	BPZ26P080FTC
	19	Screw	BSZ26P160FTC
	20	Fuse(10A)	CEK1208
	21	Pin Jack(CN352)	CKB1051
	22	Plug(CN901)	CKM1376
	23	Plug(CN351)	CKS1238
	24	Connector(CN101)	CKS3408
	25	Plug(CN801)	CKS3537
	26	Connector(CN651)	CKS3835
	27	Antenna Jack(CN401)	CKX1056
	28	Holder	CND1239
	29	Holder	CND1352
	30	Insulator	CNM8245
	31	Heat Sink	CNR1668
	32	FM/AM Tuner Unit	CWE1646
	33	Holder	CND1054
	34	Holder(DEH-P6500)	CNV7619
	35	Screw(DEH-P6500)	BMZ40P140FTC
	36	Chassis Unit	CXB9528
	37	Detach Grille Assy(DEH-P6500)	CXB9683
		Detach Grille Assy(DEH-P6550)	CXB9685
	38	Screw	BPZ20P060FTC
	39	Screw	BPZ20P100FZK
	40	Knob(VOLUME)(DEH-P6500)	CAA2753
		Knob(VOLUME)(DEH-P6550)	CAA2755
	41	Button(OPEN)	CAC7728
	42	Button(SELECT)(DEH-P6500)	CAC7731
		Button(SELECT)(DEH-P6550)	CAC7733
	43	Button(PAUSE)	CAC7737
	44	Button(AUDIO/FUNC)	CAC7738
	45	Button	CAC7750
	46	Button(CLOCK)	CAC7751
	47	Spring	CBH2654
	48	Spring	CBL1470
	49	Cushion	CNM8291
	50	Cover	CNS7247
	51	Holder	CNV7405
	52	Keyboard Unit	CWM8603
	53	Connector(CN1901)	CKS4524
	54	Holder	CND1354
	55	Cushion	CNM6633
	56	Spacer	CNM7697
	57	Spacer	CNM7698
	58	Holder	CNV6910
	59	OEL Unit	MXS8045
	60	Grille Unit(DEH-P6500)	CXB9496
		Grille Unit(DEH-P6550)	CXB9498
	61	Button Unit(EQ,SRC)	CXB9924
	62	Button Unit(EQ-EX,BAND)	CXB9925
	63	Button	CAC7752
	64	Screw(M2x2)	CBA1176
	65	Washer	CBF1038
	66	Spring	CBH2650
	67	Spring	CBH2651
	68	Spring	CBH2652
	69	Spring	CBH2653
	70	Spring	CBL1512
	71	Holder	CND1254
	72	Cover	CNM6854
	73	Panel	CNS7245
	74	Gear	CNV5997
	75	Pin	CNV6486
	76	Lighting Conductor	CNV6487
	77	Arm	CNV7400
	78	Arm	CNV7401
	79	Arm	CNV7402
	80	Arm	CNV7403
	81	Panel Unit	CWM8758
	82	Socket(CN1950)	CKS3550
	83	Connector(CN1951)	CKS4462
	84	Holder Unit	CXB9501
	85	Holder Unit	CXB9502
	86	Damper Unit	CXB9503
	87	Screw	IMS20P045FZK
	88	CD Mechanism Module(S10)	CXK5600
	89	Screw	ISS26P055FTC
	90	IC(IC301)	PAL007A
	91	Transistor(Q651,911,921)	2SD2396
	92	Choke Coil(L301)	CTH1280
	93	Remote Control Unit	CXC1265
	94	Cover	CNS7068
	95	Panel Unit(Service)	CXX1691

2.4 CD MECHANISM MODULE

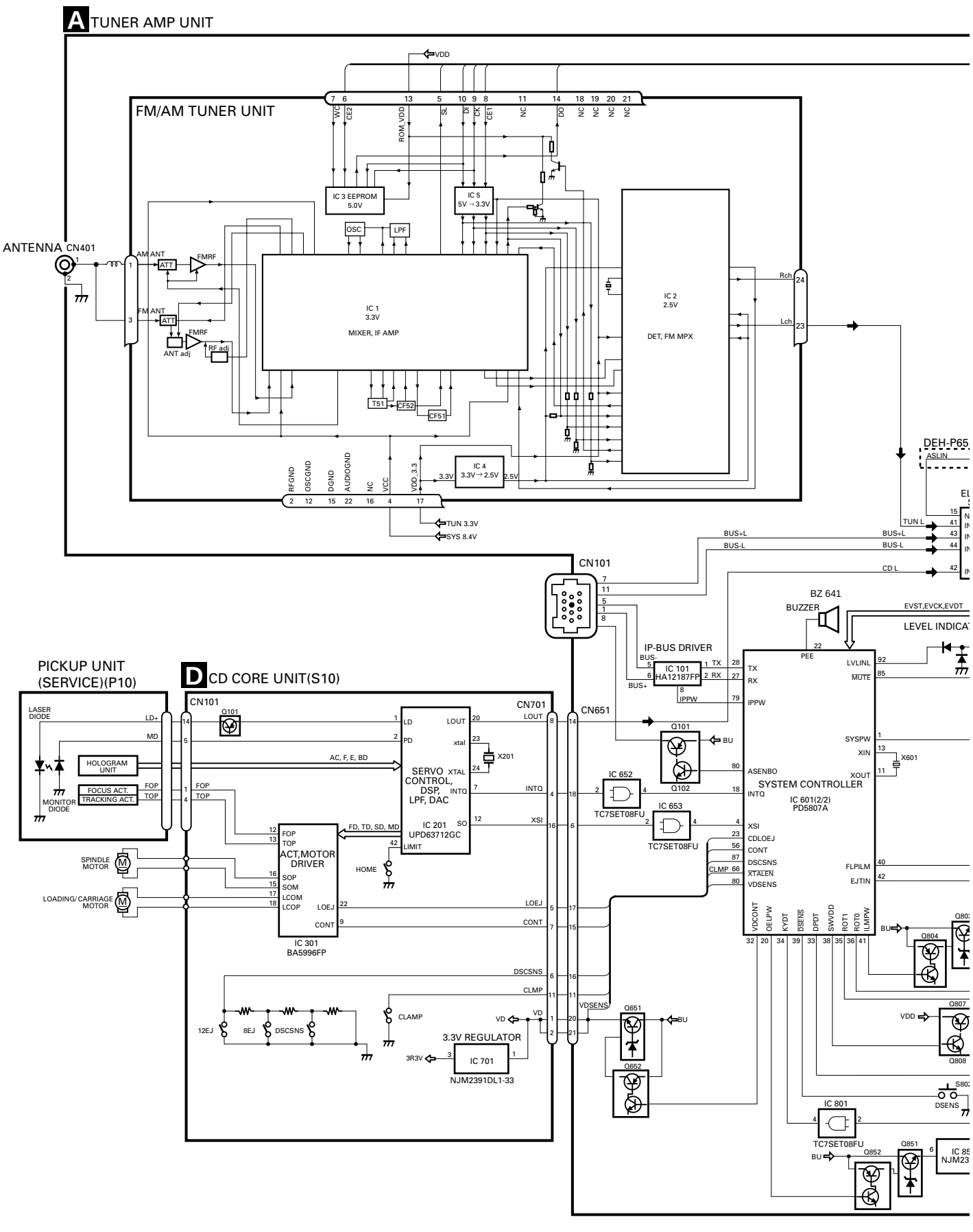


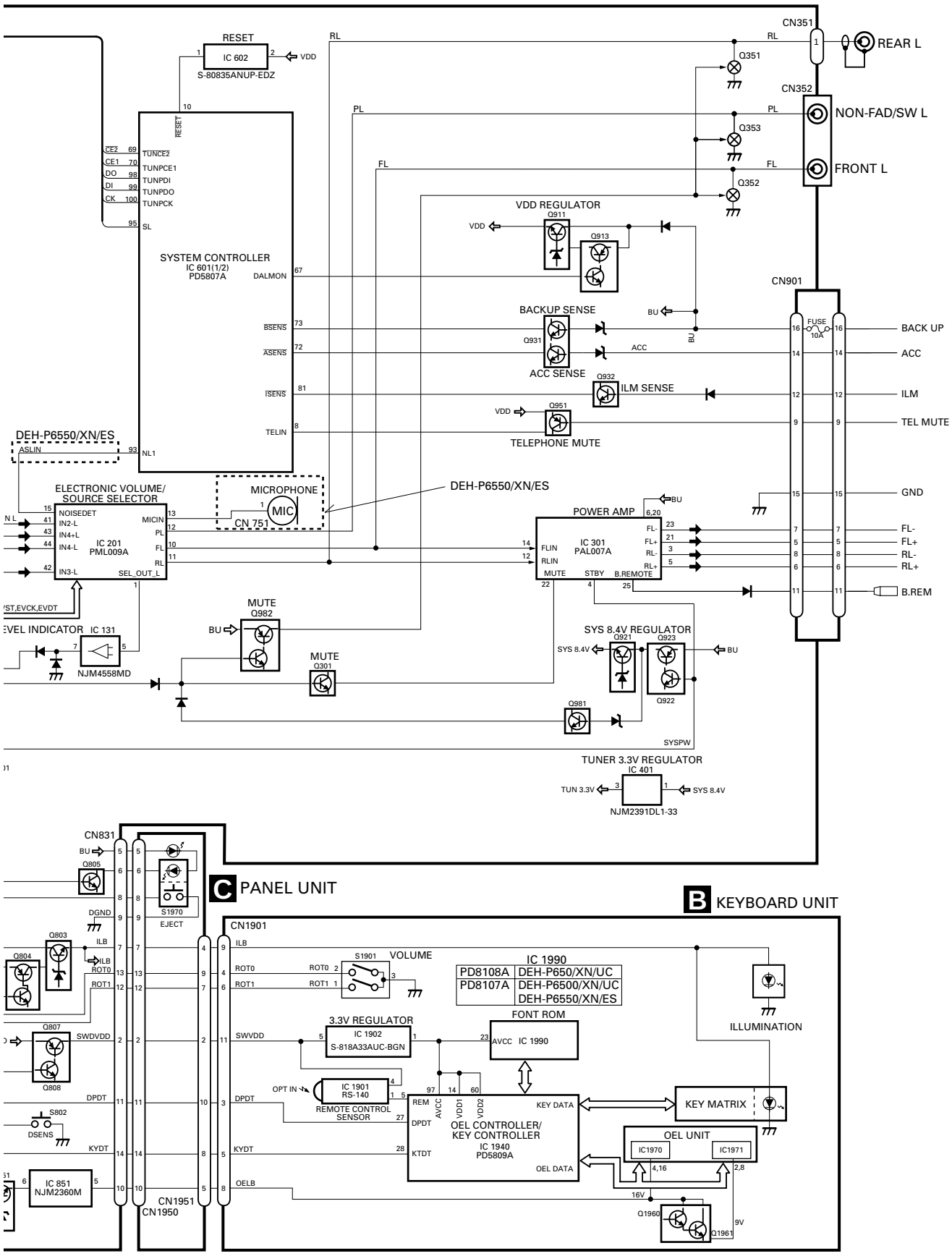
● CD MECHANISM MODULE SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	CD Core Unit(S10)	CWX2708
	2	Connector(CN101)	CKS4182
	3	Connector(CN701)	CKS4188
	4	Screw	BMZ20P035FTC
	5	Screw	BSZ20P040FTC
	6	Screw(M2x4)	CBA1362
	7	Screw(M2x3)	CBA1511
	8	Screw(M2x3)	CBA1527
	9	Washer	CBF1037
	10	Washer	CBF1038
	11	Washer	CBF1060
	12	Spring	CBH2390
	13	Spring	CBH2606
	14	Spring	CBH2607
	15	Spring	CBH2608
	16	Spring	CBH2609
	17	Spring	CBH2610
	18	Spring	CBH2611
	19	Spring	CBH2612
	20	Spring	CBH2613
	21	Spring	CBH2614
	22	Spring	CBH2615
	23	Spring	CBH2616
	24	Spring	CBH2617
	25	Spring	CBH2620
	26	Spring	CBH2621
	27	Spring	CBH2641
	28	Spring	CBH2642
	29	Spring	CBH2643
	30	Spring	CBH2659
	31	Spring	CBH2688
*	32	Spring	CBL1614
	33	Shaft	CLA3845
	34	Frame	CNC9962
	35	Frame	CNC9963
	36	Bracket	CNC9966
	37	Bracket	CNC9967
	38	Arm	CNC9968
	39	Arm	CNC9973
	40	Lever	CNC9983
	41	Lever	CNC9984
	42	Sheet	CNM8134
	43	Collar	CNV6906
	44	Guide	CNV6925
	45	Arm	CNV7198
	46	Rack	CNV7199
	47	Holder	CNV7201
	48	Holder	CNV7202
	49	Arm	CNV7203
	50	Gear	CNV7207
	51	Gear	CNV7208
	52	Gear	CNV7209
	53	Gear	CNV7210
	54	Gear	CNV7211
	55	Gear	CNV7212
	56	Rack	CNV7214
	57	Arm	CNV7215
	58	Arm	CNV7216
	59	Guide	CNV7217
	60	Roller	CNV7218
	61	Gear	CNV7219
	62	Arm	CNV7221
	63	Arm	CNV7220
	64	Arm	CNV7222
	65	Damper	CNV7313
	66	Damper	CNV7314
	67	Arm	CNV7341
	68	Arm	CNV7342
	69	Guide	CNV7360
	70	Guide	CNV7361
	71	Holder	CNV7437
	72	Arm	CNV7444
	73	Gear	CNV7595
	74	Damper	CNV7618
	75	Motor Unit(M1)	CXB6007
	76	Chassis Unit	CXB8728
	77	Screw Unit	CXB8729
	78	Gear Unit	CXB8731
	79	Arm Unit	CXB8732
	80	Arm Unit	CXB8735
	81	Arm Unit	CXB8852
	82	Motor Unit(M2)	CXB8933
	83	Bracket	CNC9985
	84	Screw	JFZ20P020FTC
	85	Screw(M2x5)	EBA1028
	86	Screw	JFZ20P020FTC
	87	Screw	JGZ17P022FTC
	88	Washer	YE15FTC
	89	Washer	YE20FTC
	90	Pickup Unit(Service)(P10)	CXX1641
	91	Screw	IMS26P030FMC

3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

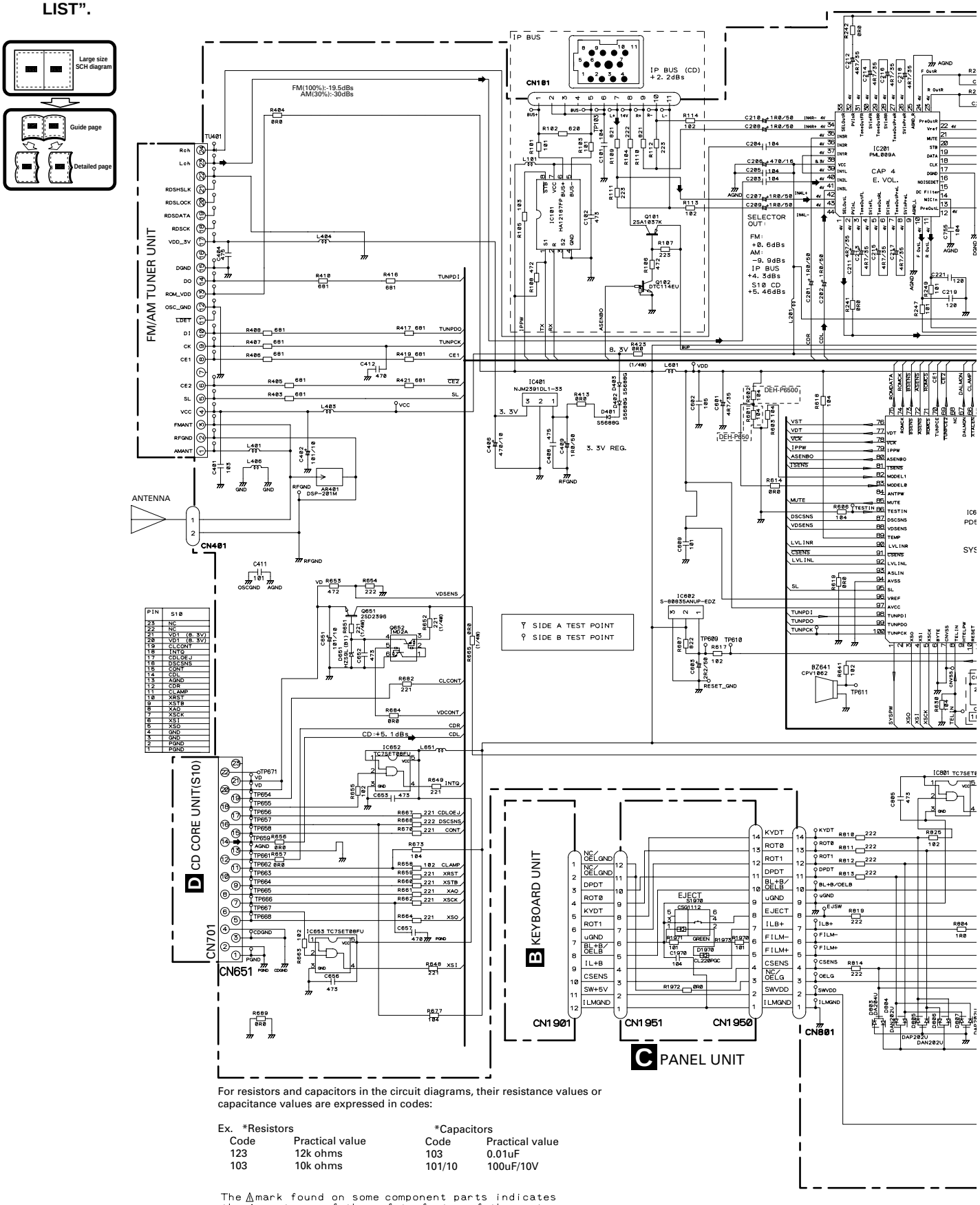
3.1 BLOCK DIAGRAM




RESET
IC 602
S-80835ANUP-EDZ
VDD
SYSTEM CONTROLLER
IC 601(1/2)
PD5807A
CN351
REAR L
CN352
NON-FAD/SW L
FRONT L
Q351
Q353
Q352
RL
PL
FL
VDD REGULATOR
Q911
Q913
CN901
BACKUP SENSE
Q931
ACC SENSE
Q932
ILM SENSE
Q951
TELEPHONE MUTE
BACK UP
ACC
ILM
TEL MUTE
GND
FL-
FL+
RL-
RL+
B.REM
FUSE
10A
DEH-P6550/XN/ES
ELECTRONIC VOLUME/
SOURCE SELECTOR
IC 201
PML009A
MICROPHONE
MIC
CN 751
POWER AMP
IC 301
PAL007A
MUTE
STBY
B.REMOTE
MUTE
Q982
MUTE
Q301
SYS 8.4V REGULATOR
Q921
Q923
Q922
Q981
SYSPW
TUNER 3.3V REGULATOR
IC 401
TUN 3.3V
SYS 8.4V
NJM2391DL1-33
IC 131
NJM4558MD
CN831
S1970
EJECT
C PANEL UNIT
B KEYBOARD UNIT
CN1901
VOLUME
S1901
IC 1990
PD8108A DEH-P650/XN/UC
PD8107A DEH-P6500/XN/UC
DEH-P6550/XN/ES
3.3V REGULATOR
IC 1902
S-818A33AUC-BGN
FONT ROM
IC 1990
ILLUMINATION
IC 1901
RS-140
REMOTE CONTROL
SENSOR
OEL CONTROLLER/
KEY CONTROLLER
IC 1940
PD5809A
KEY MATRIX
OEL UNIT
IC1970
IC1971
IC 851
NJM2360M
CN1951
CN1950
Q1960
Q1961
16V
9V

3.2 OVERALL CONNECTION DIAGRAM(GUIDE PAGE) (DEH-P650/XN/UC, P6500/XN/UC)

Note: When ordering service parts, be sure to refer to "EXPLODED VIEWS AND PARTS LIST" or "ELECTRICAL PARTS LIST".



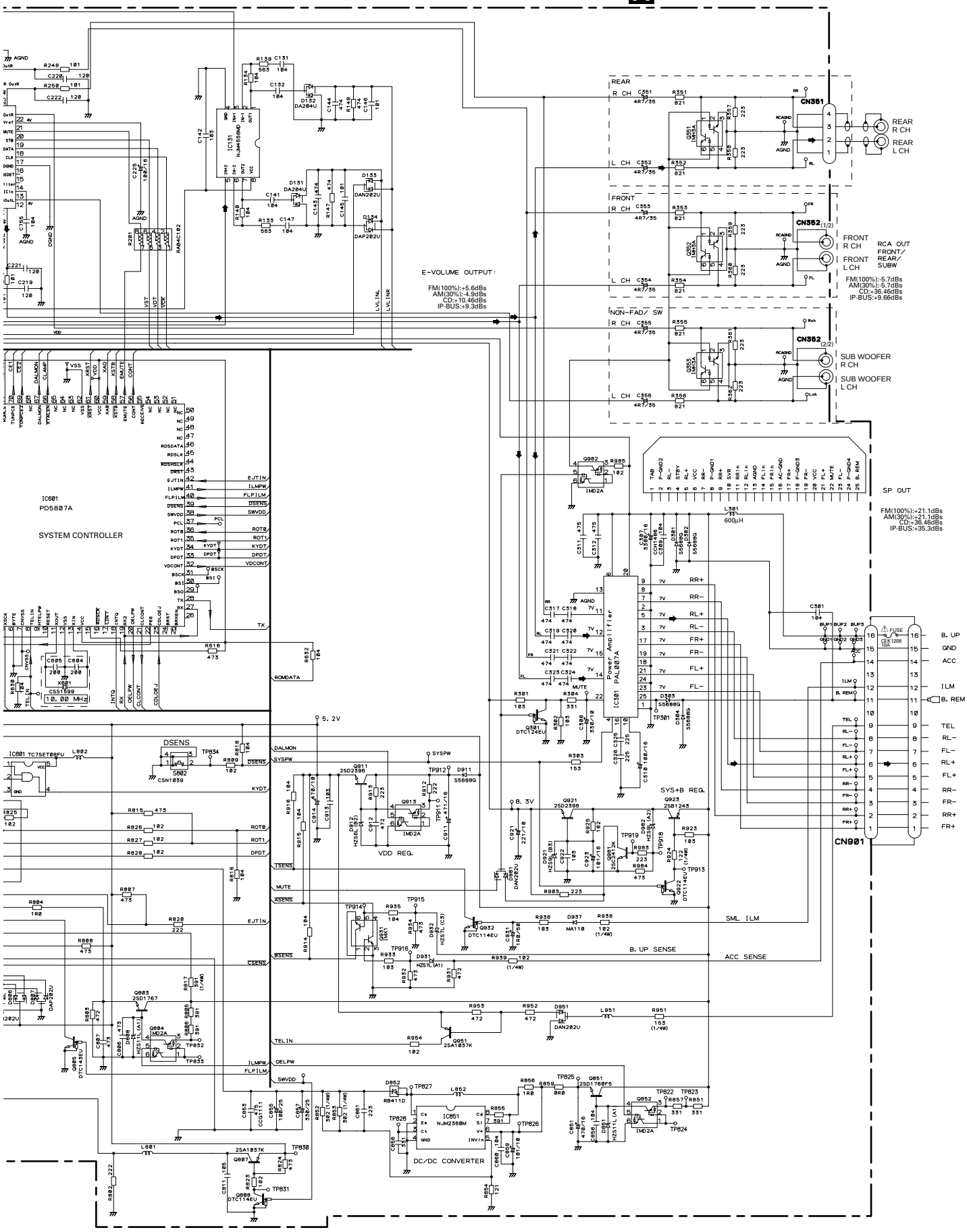
PIN	S10
23	NC
22	NC
21	VD1 (8. 3V)
20	VD1 (8. 3V)
19	CLCONT
18	INTQ
17	CDLOEJ
16	DSCSNS
15	CONT
14	CDL
13	AGND
12	CDR
11	CLAMP
10	XRST
9	XSTB
8	XAO
7	XSCK
6	XSI
5	XSO
4	GND
3	GND
2	PGND
1	PGND

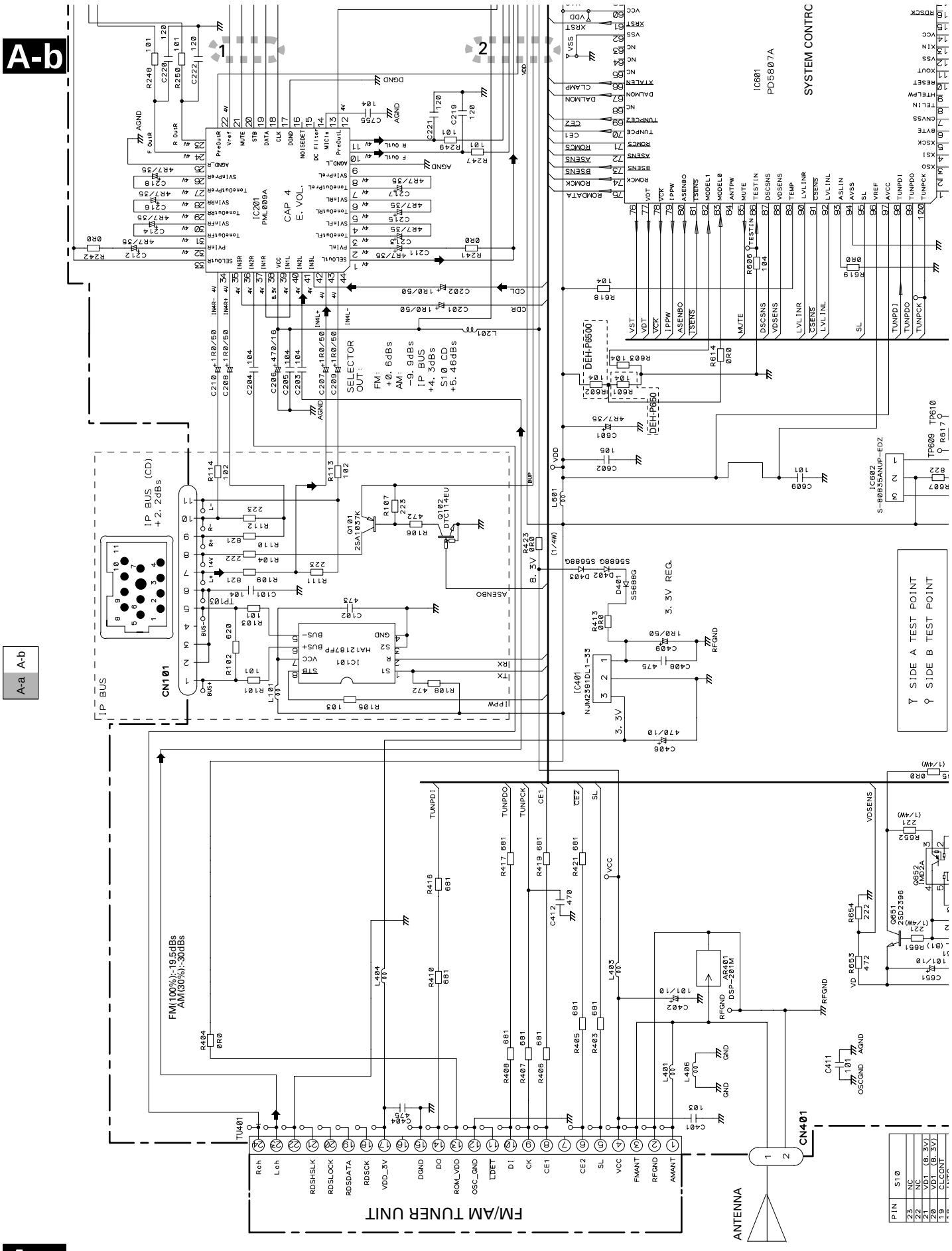
For resistors and capacitors in the circuit diagrams, their resistance values or capacitance values are expressed in codes:

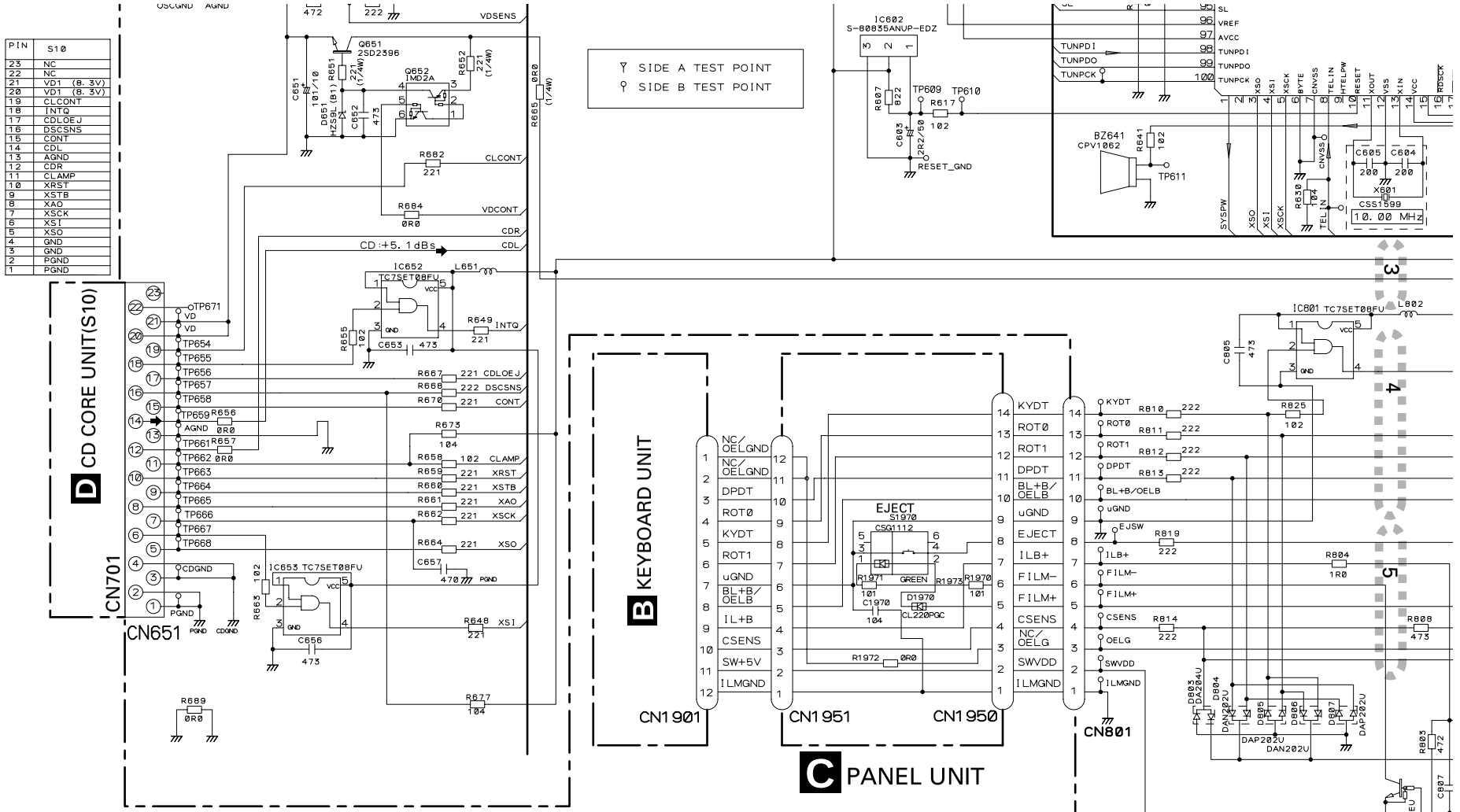
Ex.	*Resistors		*Capacitors	
	Code	Practical value	Code	Practical value
	123	12k ohms	103	0.01uF
	103	10k ohms	101/10	100uF/10V

The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

A TUNER AMP UNIT




A-b
A-a
IC201
PML009A
CAP 4
E. VOL.
IC601
PD5807A
SYSTEM CONTRO
SELECTOR
OUT:
FM: 0.6dBs
+0.6dBs
AM: -9.9dBs
IP BUS
+4.3dBs
S10 CD
+5.4dBs
DEH-P6500
DEH-P650
IP BUS (CD)
+2.2dBs
IP BUS
CN101
IC101
HA12187FP
IC401
NJM2391DL1-33
3.3V REG.
FM(100%):-19.5dBs
AM(30%):-30dBs
FM/AM TUNER UNIT
CN401
ANTENNA
SIDE A TEST POINT
SIDE B TEST POINT
PIN
S10
NC
NC
VD1 (8.3V)
VD1 (8.3V)
CLCONT



PIN	S10
23	NC
22	NC
21	VD1 (8.3V)
20	VD1 (8.3V)
19	CLCONT
18	INTQ
17	CDLOEJ
16	DSCSNS
15	CONT
14	CDL
13	AGND
12	CDR
11	CLAMP
10	XRST
9	XSTB
8	XAO
7	XSCK
6	XSI
5	XSO
4	GND
3	GND
2	PGND
1	PGND

For resistors and capacitors in the circuit diagrams, their resistance values or capacitance values are expressed in codes:

Ex. *Resistors		*Capacitors	
Code	Practical value	Code	Practical value
123	12k ohms	103	0.01uF
103	10k ohms	101/10	100uF/10V

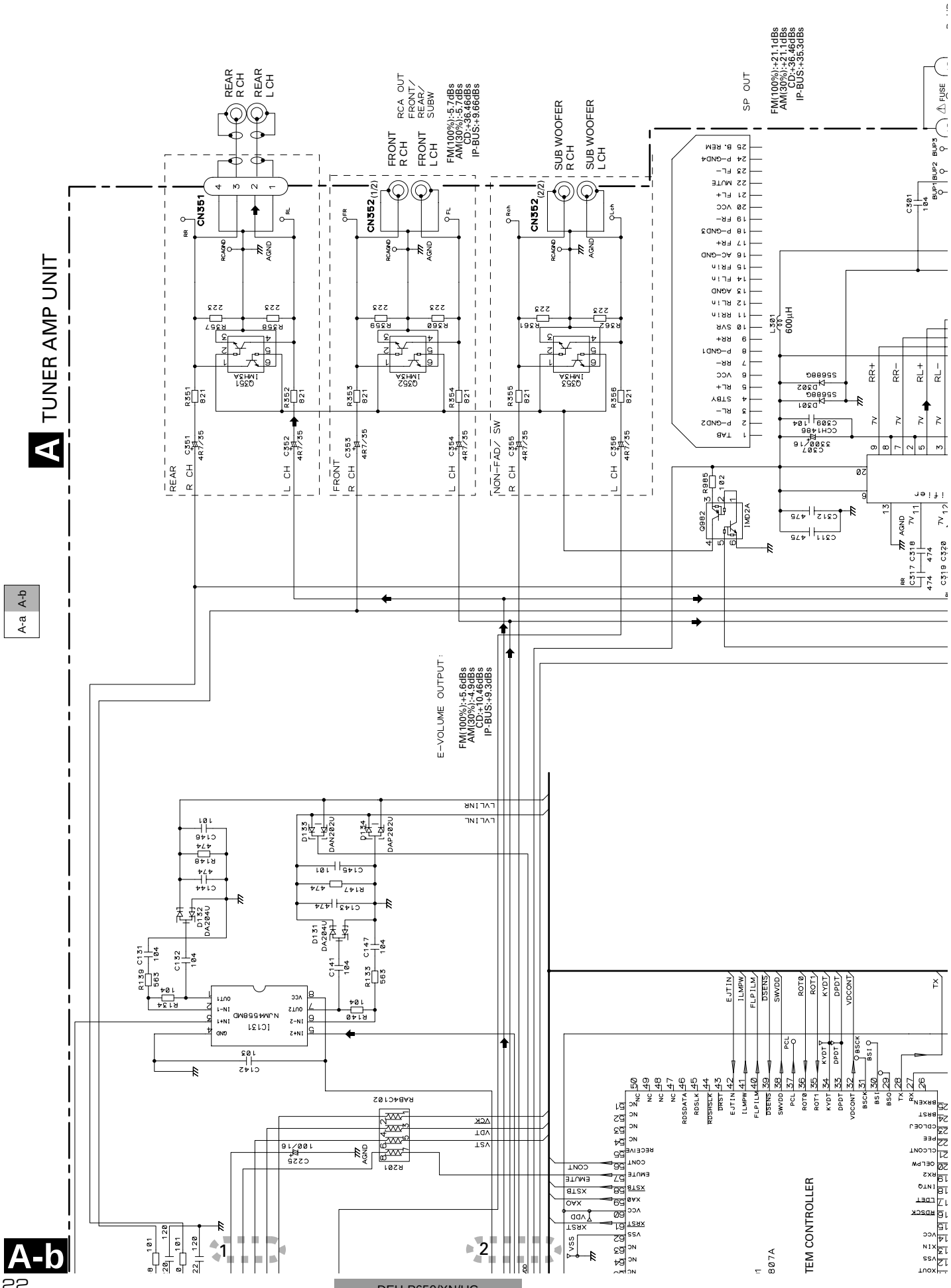
The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

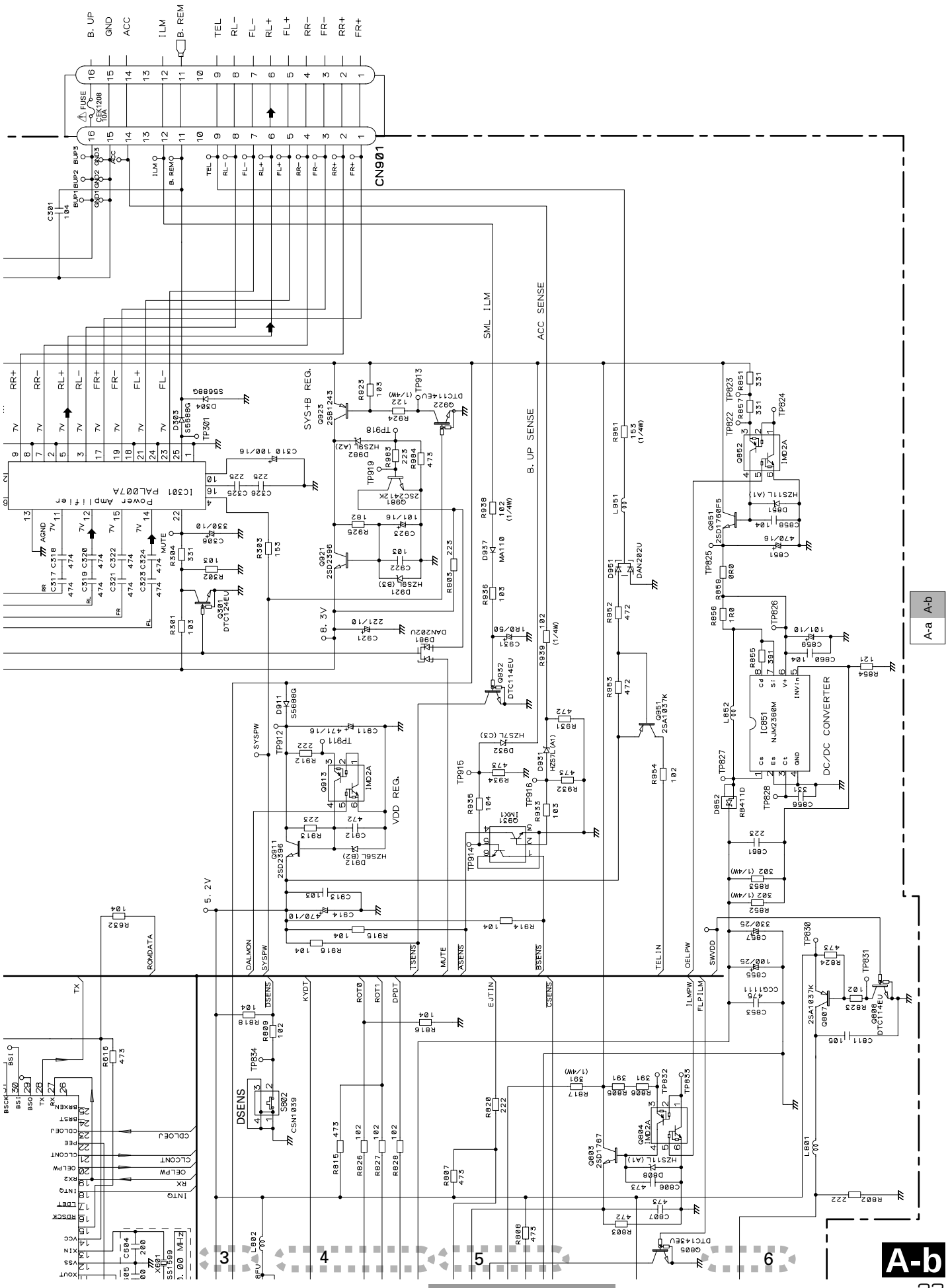
A-a A-b

A-a C 21

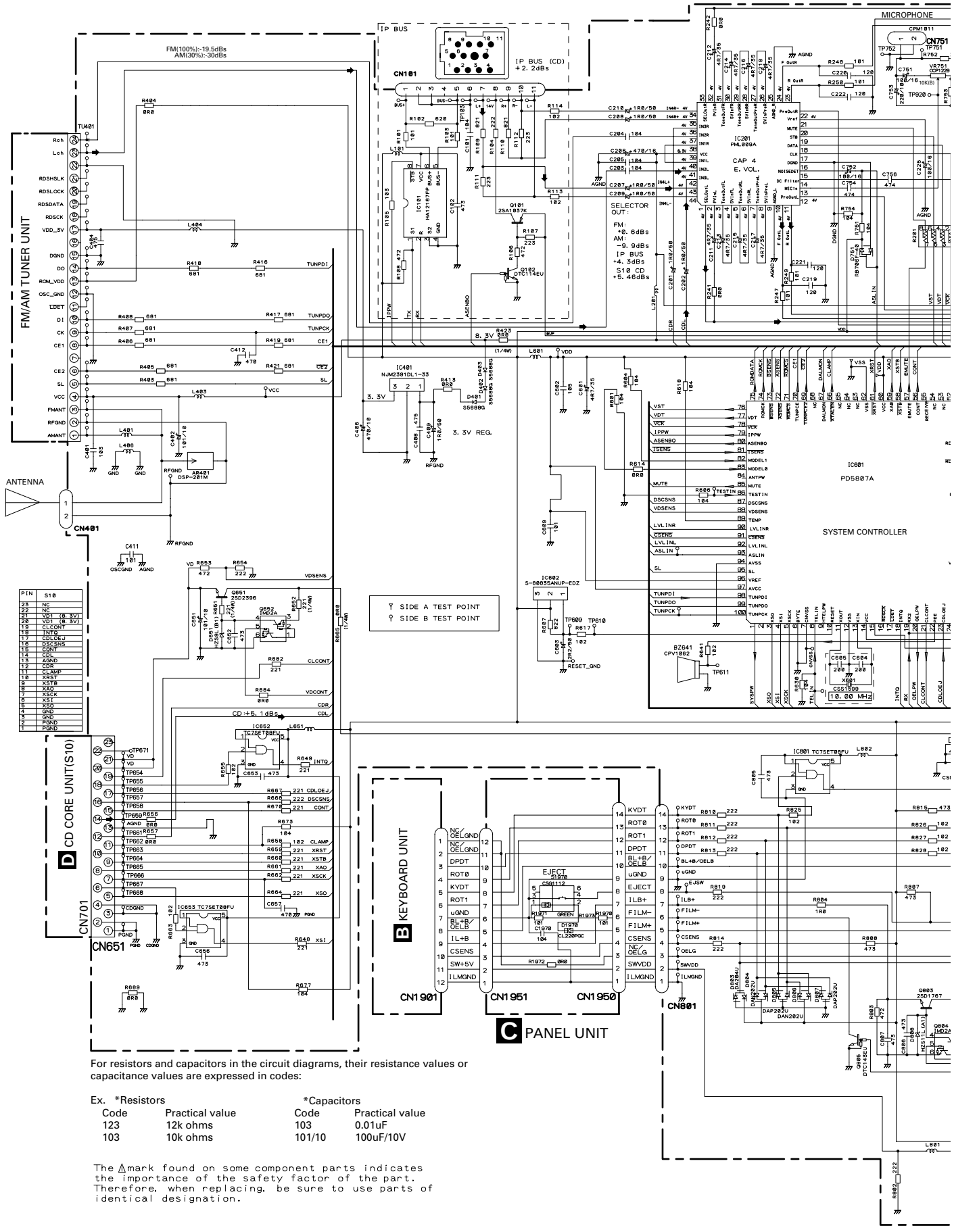
A-b

DEH-P650/XN/UC


A TUNER AMP UNIT
A-a A-b
REAR R CH
REAR L CH
FRONT R CH
FRONT L CH
RCA OUT FRONT/ REAR/ SUBW
FM(100%):-5.7dBs AM(30%):-5.7dBs CD:+36.46dBs IP-BUS:+9.66dBs
SUB WOOFER R CH
SUB WOOFER L CH
SP OUT
FM(100%):+21.1dBs AM(30%):+21.1dBs CD:+36.46dBs IP-BUS:+35.3dBs
CN351
CN352 (1/2)
CN352 (2/2)
REAR R CH
REAR L CH
FRONT R CH
FRONT L CH
NON-FAD/ SW R CH
NON-FAD/ SW L CH
E-VOLUME OUTPUT :
FM(100%):+5.6dBs AM(30%):+4.9dBs CD:+10.46dBs IP-BUS:+9.3dBs
TEM CONTROLLER
A-b
1
2


B. UP
GND
ACC
ILM
B. REM
TEL
RL−
FL−
RL+
FL+
RR−
FR−
RR+
FR+
CN901
SML ILM
ACC SENSE
B. UP SENSE
SYS+B REG.
IC301 Power Amplifier
DC/DC CONVERTER
IC851 NJM2360M
VDD REG.
DSENS
CSN1039
CDLOEJ
CLCONT
OELPW
INTG
RX
TX
ROMDATA
DALMON
SYSPW
TSENS
MUTE
ASENS
BSENS
TEL IN
SWVDD
1LMPW
FLP1LM
EJTIN
CSENS
KYDT
ROT0
ROT1
DPDT
5. 2V
8. 3V
SYS+B
ACC
B. UP
A-b
A-a
DEH-P650/XN/UC
23

3.3 OVERALL CONNECTION DIAGRAM(GUIDE PAGE)(DEH-P6550/XN/ES)



For resistors and capacitors in the circuit diagrams, their resistance values or capacitance values are expressed in codes:

Ex. *Resistors

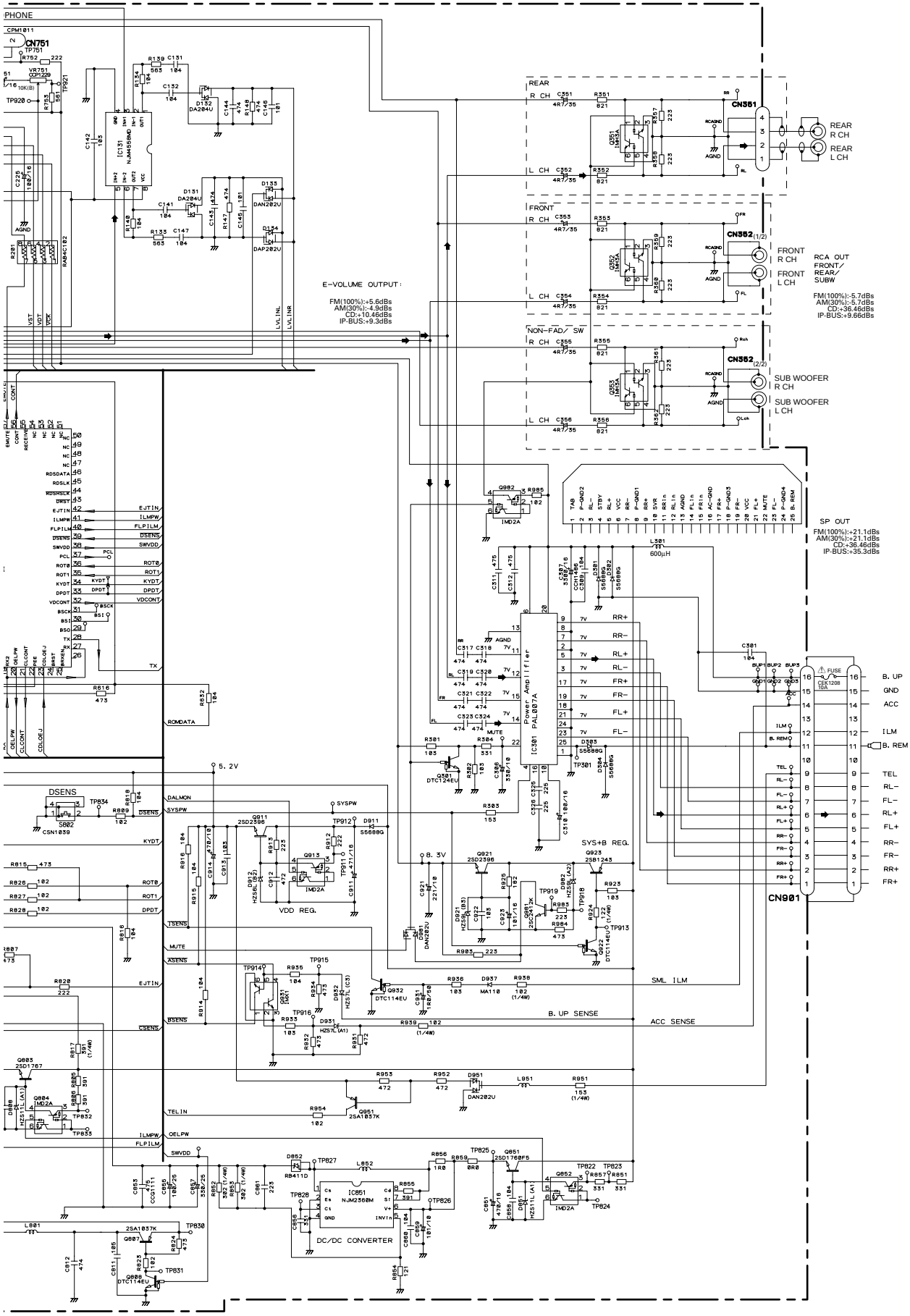
Code	Practical value
123	12k ohms
103	10k ohms

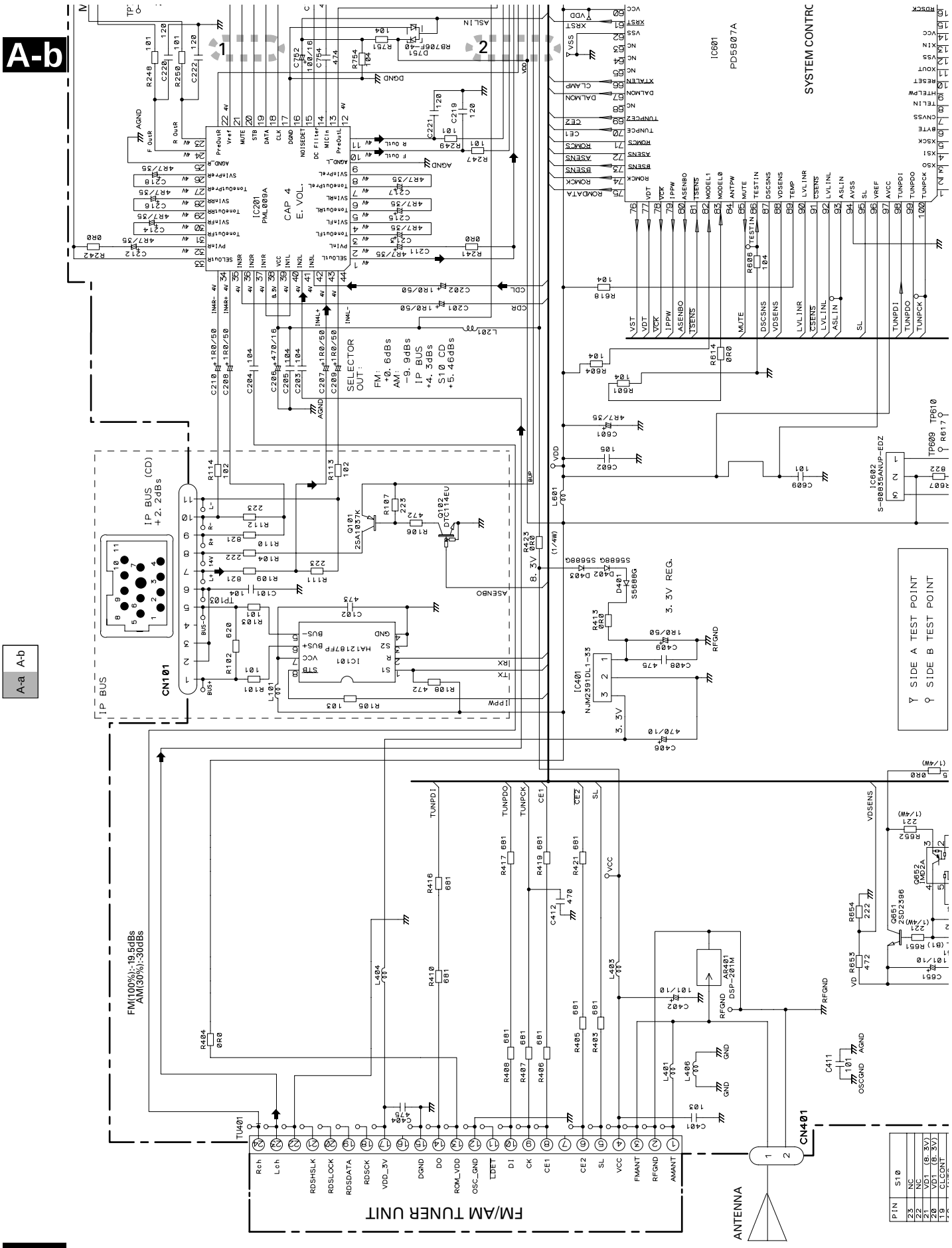
*Capacitors

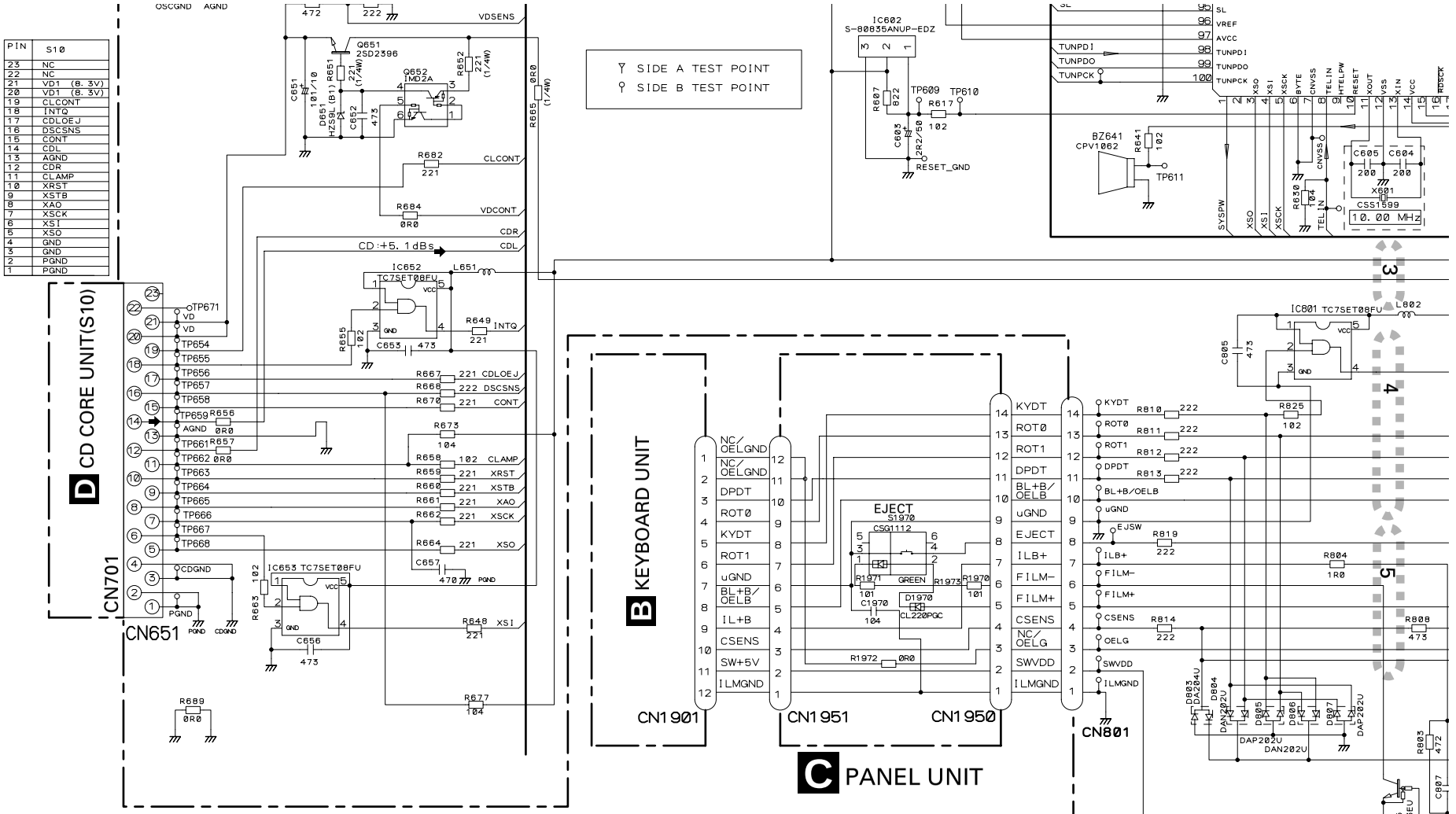
Code	Practical value
103	0.01uF
101/10	100uF/10V

The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

A TUNER AMP UNIT




A-b
A-a
SYSTEM CONTRC
IC601
PD5807A
IC201
PML009A
CAP 4
E. VOL.
SELECTOR OUT:
FM: 0. 6dBs
AM: -9. 9dBs
IP BUS +4. 3dBs
S10 CD +5. 46dBs
IP BUS (CD) +2. 2dBs
IP BUS
CN101
CN401
IC401
NJM2391DL1-33
3. 3V REG.
IC101
HA12187FP
IC602
S-80835ANUP-EDZ
TU401
FM/AM TUNER UNIT
ANTENNA
AR401
DSP-201M
Q651
2SD2396
Q652
IMD2A
Q101
2SA1037K
Q102
DTC114EU
D401
S5688G
FM(100%):-19.5dBs
AM(30%):-30dBs
∀ SIDE A TEST POINT
♀ SIDE B TEST POINT
PIN
S10
23 NC
22 NC
21 VDD (8. 3V)
20 VDD (8. 3V)
19 CLCONT



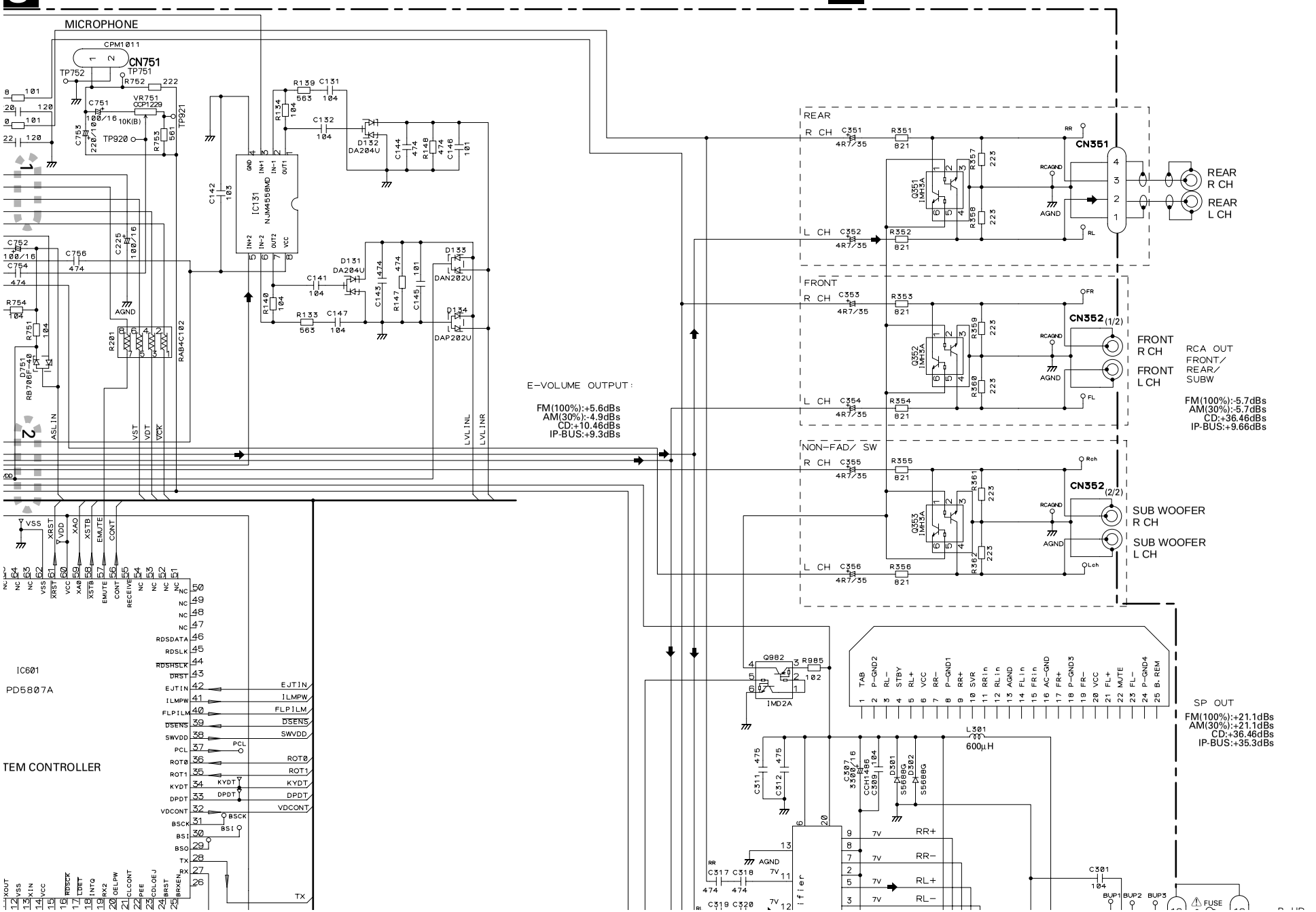
For resistors and capacitors in the circuit diagrams, their resistance values or capacitance values are expressed in codes:

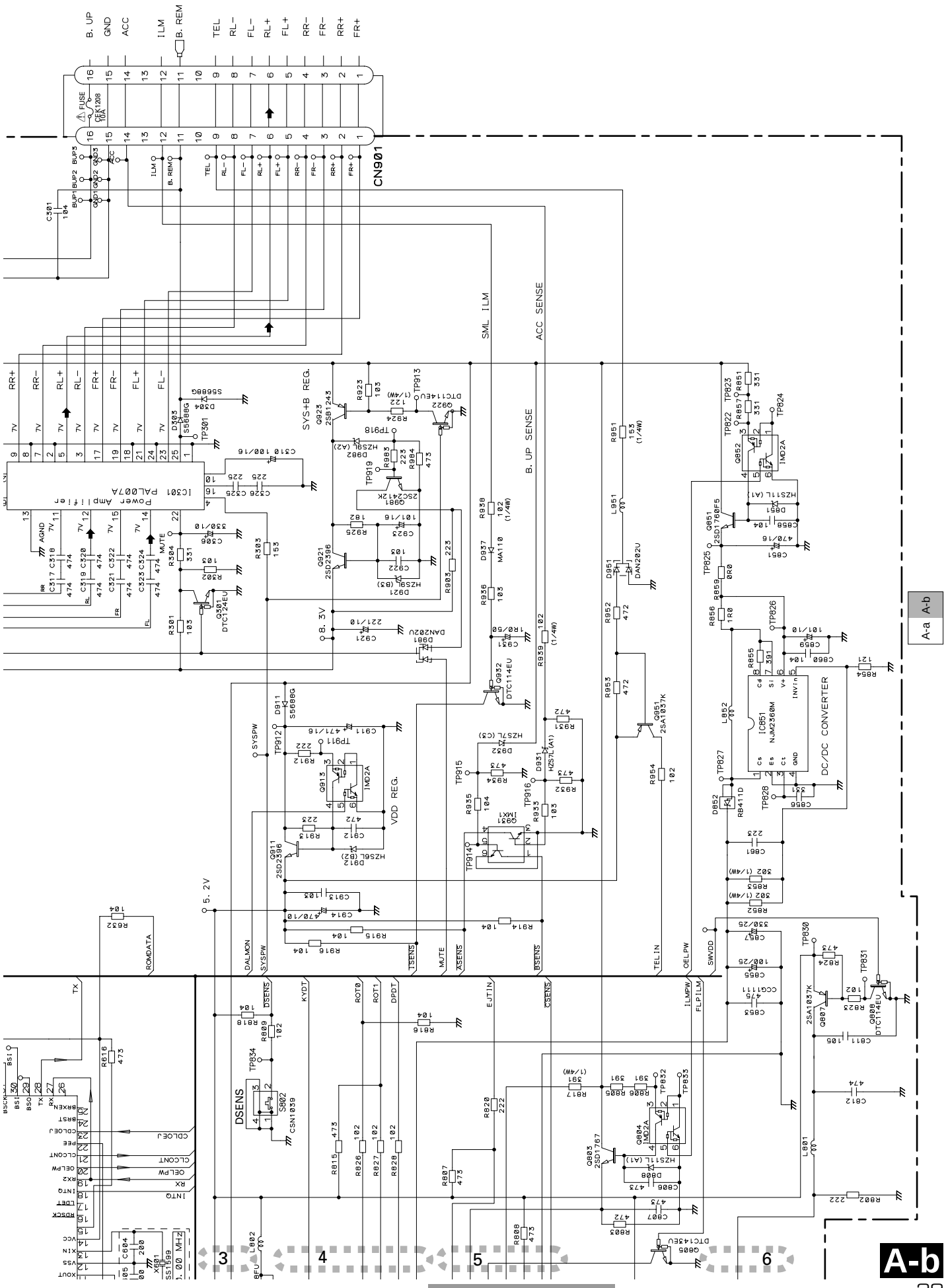
Ex.	*Resistors		*Capacitors	
	Code	Practical value	Code	Practical value
	123	12k ohms	103	0.01uF
	103	10k ohms	101/10	100uF/10V

The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

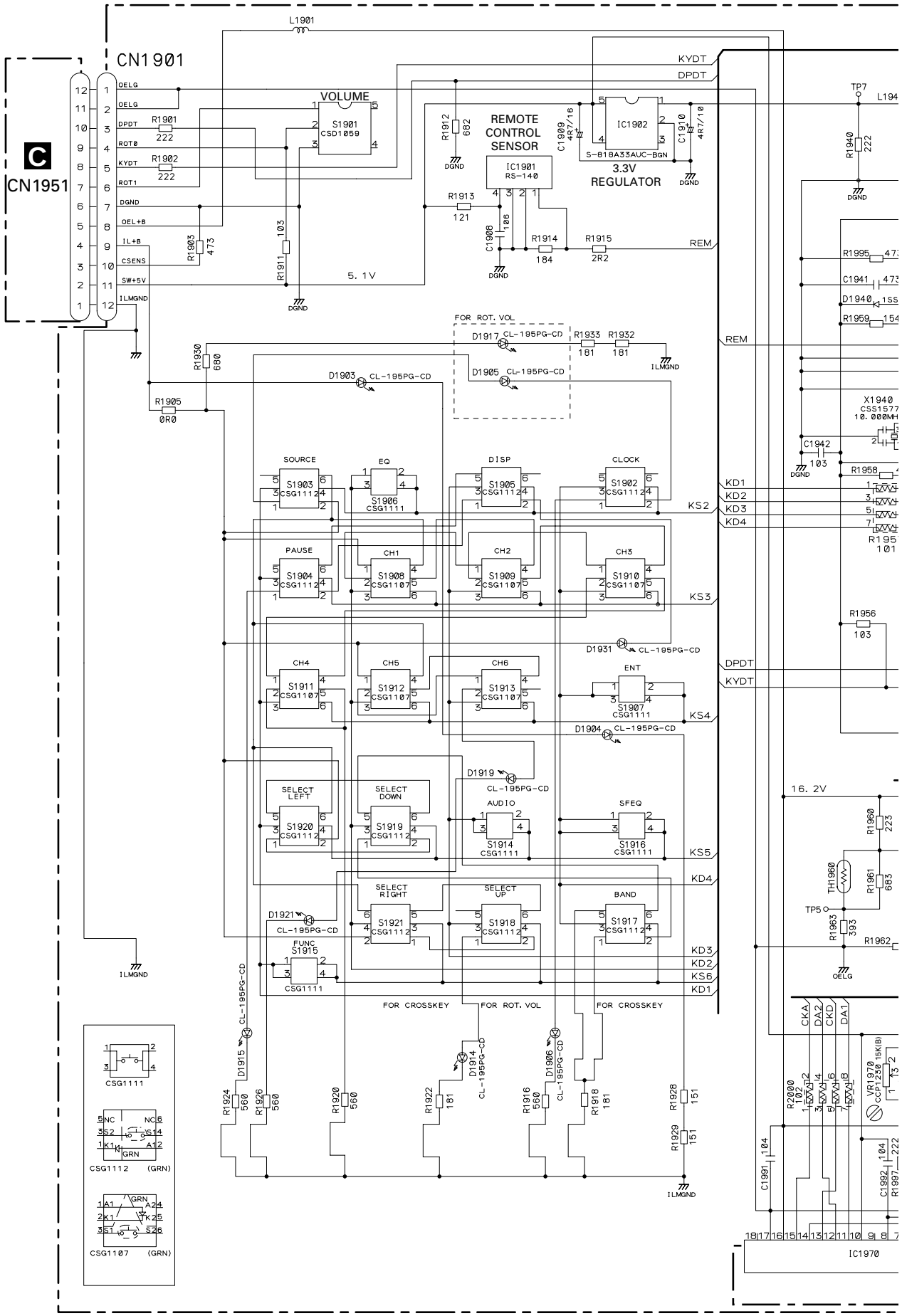
A-a A-b

A TUNER AMP UNIT

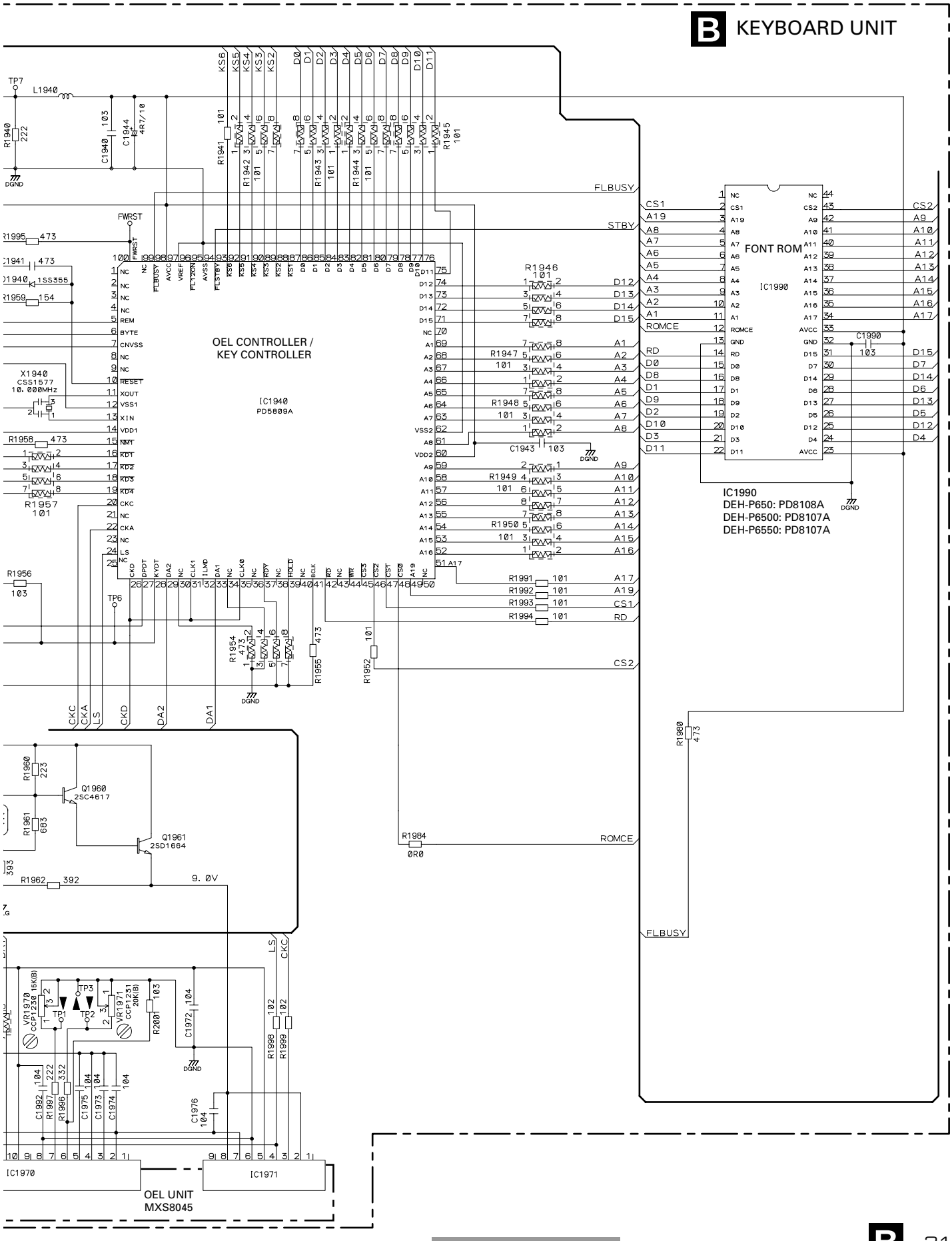



CN901
B. UP
GND
ACC
ILM
B. REM
TEL
RL−
FL−
RL+
FL+
RR−
FR−
RR+
FR+
SML ILM
ACC SENSE
B. UP SENSE
SYS+B REG.
B. 3V
5. 2V
VDD REG.
DC/DC CONVERTER
IC301 Power Amplifier PAL007A
IC851 NJM2360M
DSENS
S802 CSN1039
SYSPW
DALMON
ROMDATA
TSENS
MUTE
ASENS
BSENS
TELIN
OELPW
SWVDD
ILMPW
FLPILM
EJTIN
CSENS
KYDT
ROT0
ROT1
DPDT
CDLOEJ
CLCONT
OELPW
RX
INTG
RSTCK
LDET
XOUT
XIN
VSS
VCC
A-a
A-b
A
B
C
D
E
F
3
4
5
6

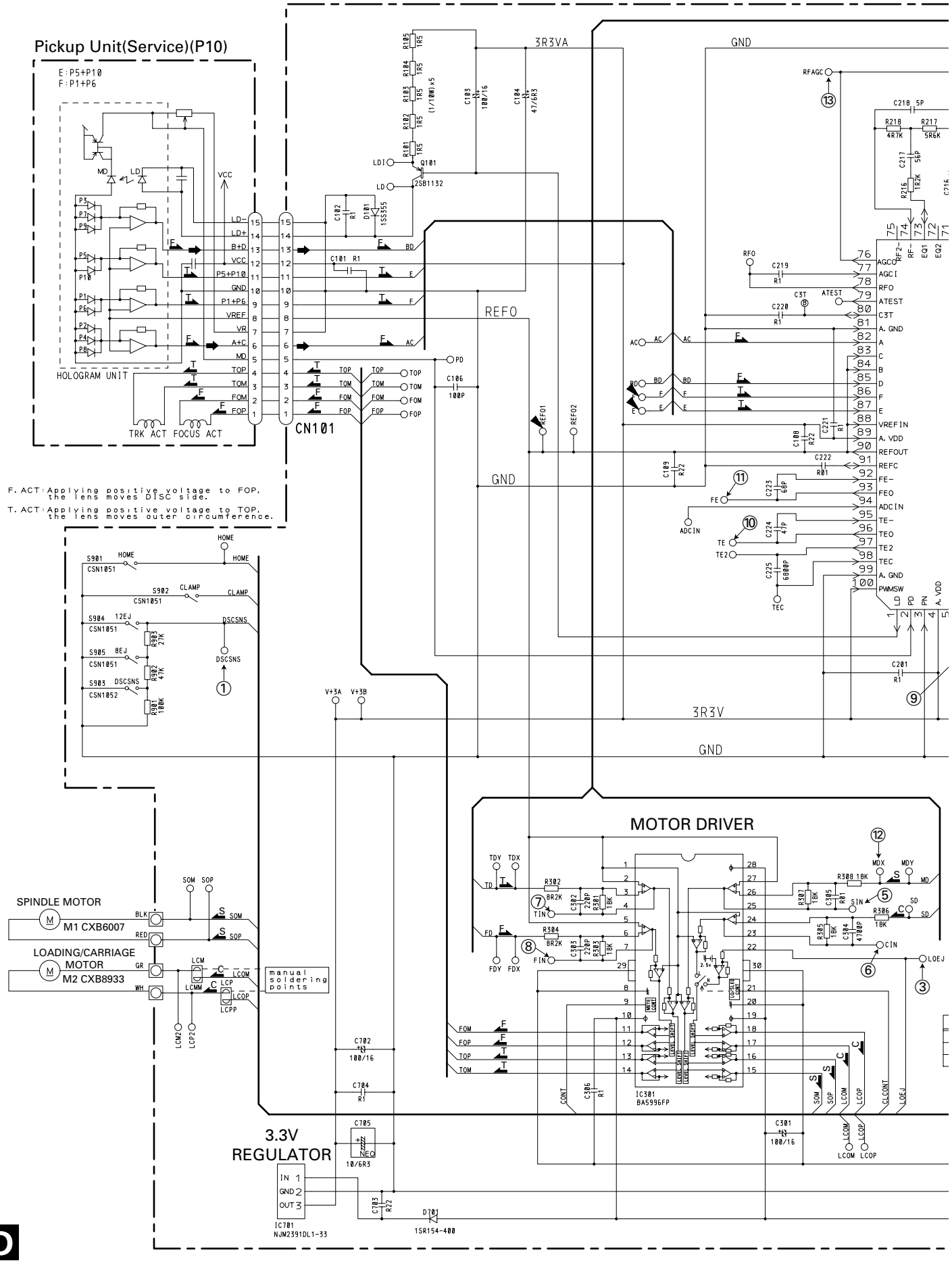
3.4 KEYBOARD UNIT

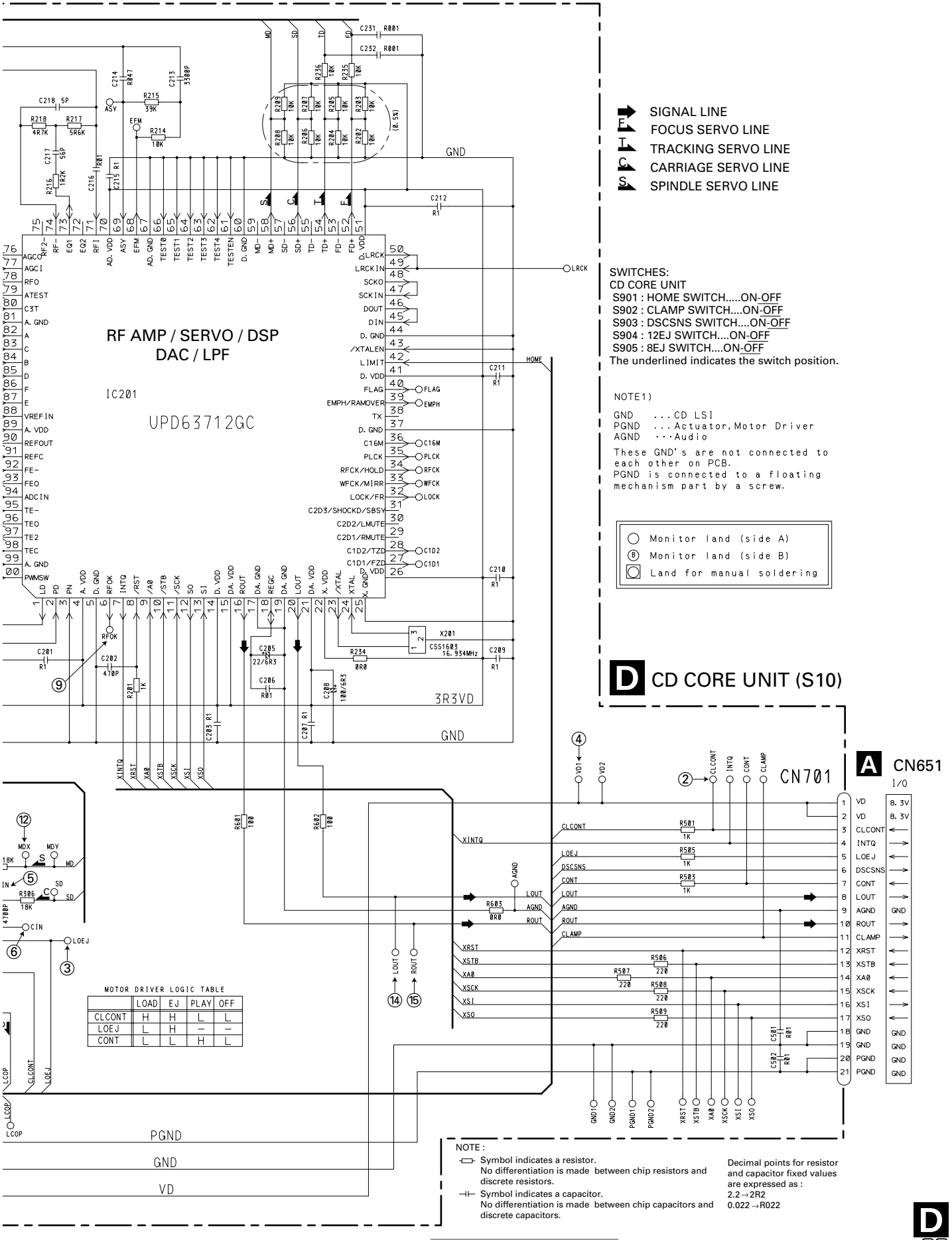


B KEYBOARD UNIT



3.5 CD MECHANISM MODULE



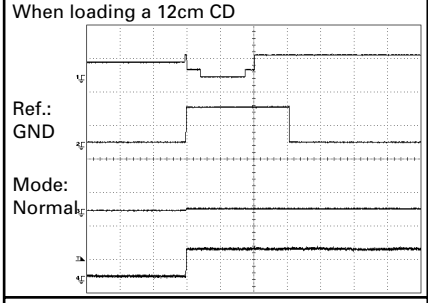

SIGNAL LINE
FOCUS SERVO LINE
TRACKING SERVO LINE
CARRIAGE SERVO LINE
SPINDLE SERVO LINE
SWITCHES:
CD CORE UNIT
S901 : HOME SWITCH.....ON-OFF
S902 : CLAMP SWITCH....ON-OFF
S903 : DSCSNS SWITCH....ON-OFF
S904 : 12EJ SWITCH....ON-OFF
S905 : 8EJ SWITCH....ON-OFF
The underlined indicates the switch position.
NOTE1)
GND ...CD LSI
PGND ...Actuator, Motor Driver
AGND ···Audio
These GND's are not connected to each other on PCB.
PGND is connected to a floating mechanism part by a screw.
Monitor land (side A)
Monitor land (side B)
Land for manual soldering
RF AMP / SERVO / DSP
DAC / LPF
IC201
UPD63712GC
D CD CORE UNIT (S10)
A CN651
CN701
MOTOR DRIVER LOGIC TABLE
LOAD EJ PLAY OFF
CLCONT H H L L
LOEJ L H – –
CONT L L H L
NOTE :
Symbol indicates a resistor.
No differentiation is made between chip resistors and discrete resistors.
Symbol indicates a capacitor.
No differentiation is made between chip capacitors and discrete capacitors.
Decimal points for resistor and capacitor fixed values are expressed as :
2.2→2R2
0.022→R022

● Waveforms

Note : 1. The encircled numbers denote measuring points in the circuit diagram.
2. Reference voltage REFO1(1.65V)

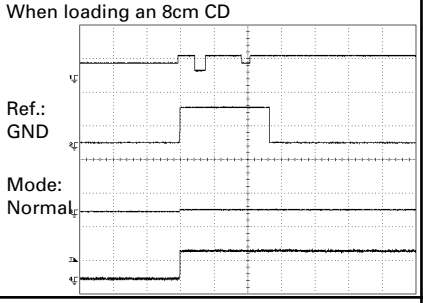
① DSCSNS 5V/div 500ms/div
② CLCONT 5V/div
③ LOEJ 5V/div
④ VD 10V/div

When loading a 12cm CD



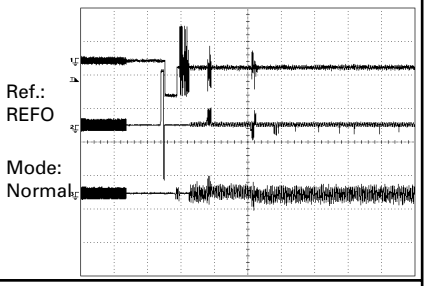
① DSCSNS 5V/div 500ms/div
② CLCONT 5V/div
③ LOEJ 5V/div
④ VD 10V/div

When loading an 8cm CD



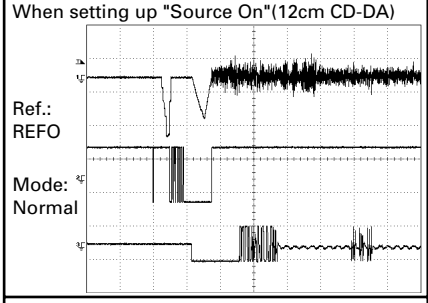
⑤ SIN 1V/div 2s/div
⑥ CIN 500mV/div
⑦ TIN 500mV/div

When setting up after loading a 12cm CD-DA disc



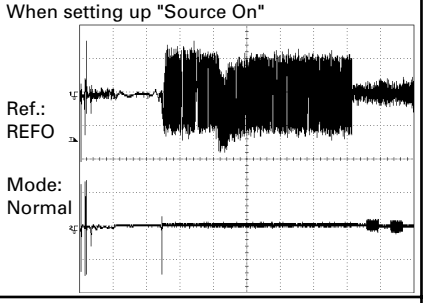
⑧ FIN 200mV/div 500ms/div
⑨ RFOK 2V/div
⑤ SIN 2V/div

When setting up "Source On"(12cm CD-DA)



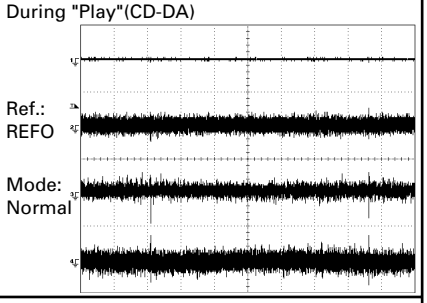
⑩ TE 500mV/div 200ms/div
⑪ FE 500mV/div

When setting up "Source On"



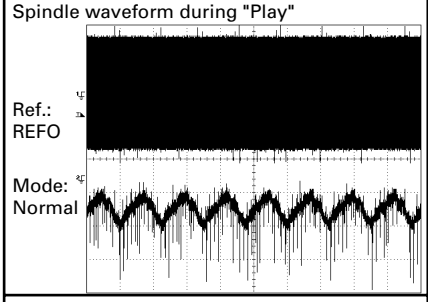
⑪ FE 500mV/div 20ms/div
⑧ FIN 500mV/div
⑩ TE 500mV/div
⑦ TIN 500mV/div

During "Play"(CD-DA)



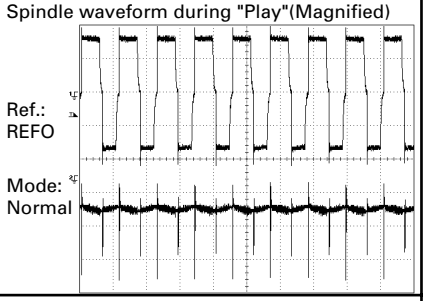
⑫ MDX 500mV/div 5ms/div
⑤ SIN 1V/div

Spindle waveform during "Play"



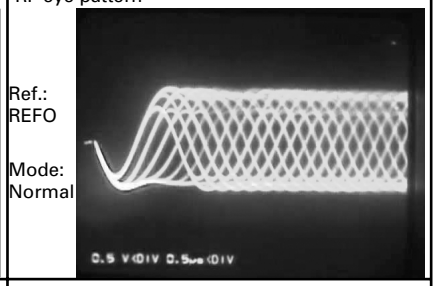
⑫ MDX 500mV/div 5µs/div
⑤ SIN 1V/div

Spindle waveform during "Play"(Magnified)



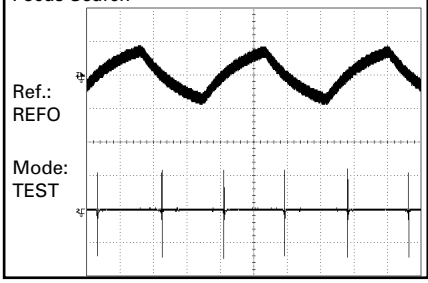
⑬ RFAGC 500mV/div 0.5µs/div

RF eye pattern



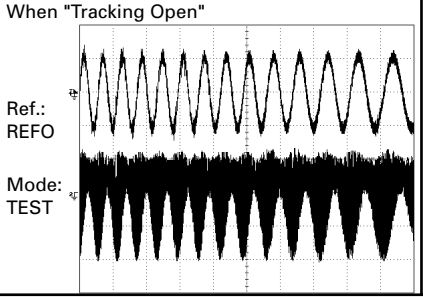
⑧ FIN 500mV/div 200ms/div
⑪ FE 500mV/div

Focus Search



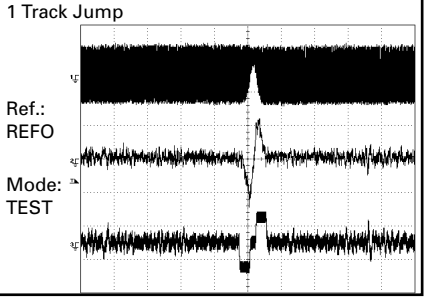
⑩ TE 500mV/div 2ms/div
⑬ RFAGC 500mV/div

When "Tracking Open"



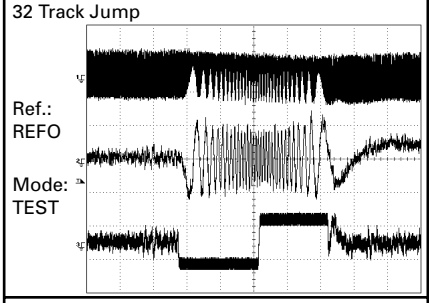
⑬ RFAGC 1V/div 500µs/div
⑩ TE 500mV/div
⑦ TIN 500mV/div

1 Track Jump



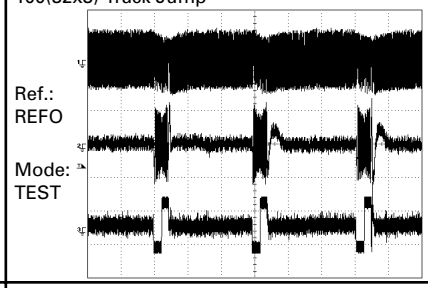
⑬ RFAGC	1V/div	500ms/div
⑩ TE	500mV/div	
⑦ TIN	500mV/div	

32 Track Jump



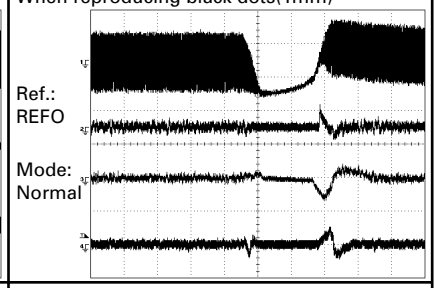
⑬ RFAGC	1V/div	5ms/div
⑩ TE	500mV/div	
⑦ TIN	500mV/div	

100(32x3) Track Jump



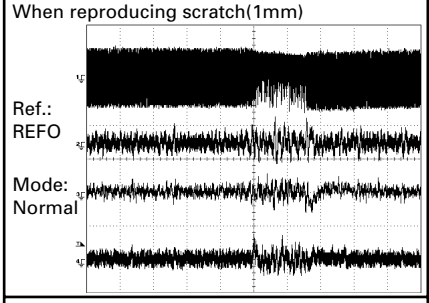
⑬ RFAGC	1V/div	500µs/div
⑦ TIN	1V/div	
⑩ TE	1V/div	
⑧ FIN	1V/div	

When reproducing black dots(1mm)



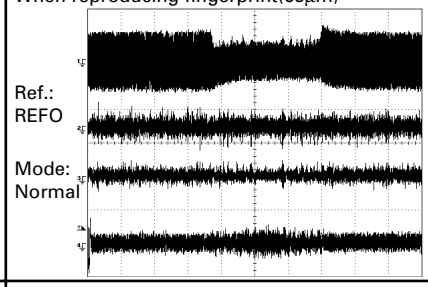
⑬ RFAGC	1V/div	500µs/div
⑩ TE	1V/div	
⑥ CIN	500mV/div	
⑤ SIN	2V/div	

When reproducing scratch(1mm)



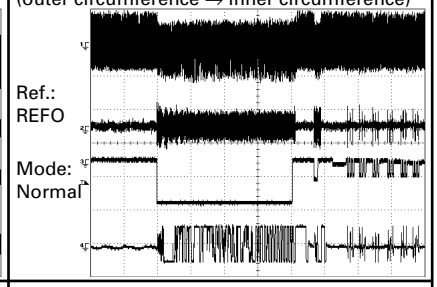
⑬ RFAGC	1V/div	5ms/div
⑩ TE	1V/div	
⑥ CIN	500mV/div	
⑤ SIN	2V/div	

When reproducing fingerprint(65µm)



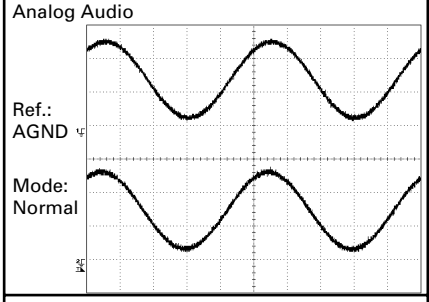
⑬ RFAGC	1V/div	500µs/div
⑩ TE	1V/div	
⑥ CIN	500mV/div	
⑤ SIN	2V/div	

During inside/outside search
(outer circumference → inner circumference)



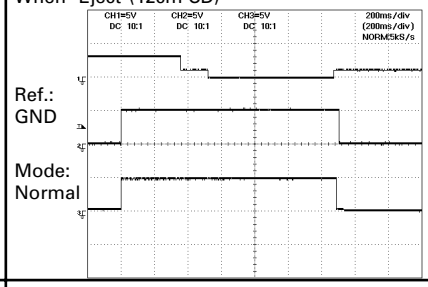
⑭ LOUT	1V/div	200µs/div
⑮ ROUT	1V/div	

Analog Audio



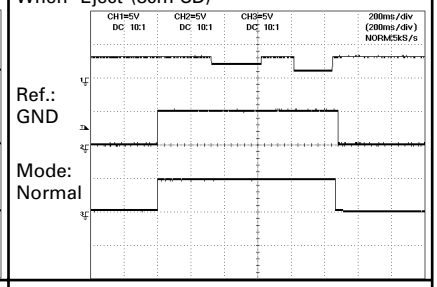
① DSCSNS	5V/div	200ms/div
② CLCONT	5V/div	
③ LOEJ	5V/div	

When "Eject"(12cm CD)



① DSCSNS	5V/div	200ms/div
② CLCONT	5V/div	
③ LOEJ	5V/div	

When "Eject"(8cm CD)

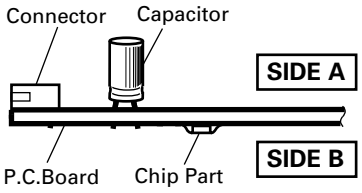


4. PCB CONNECTION DIAGRAM

4.1 TUNER AMP UNIT

NOTE FOR PCB DIAGRAMS

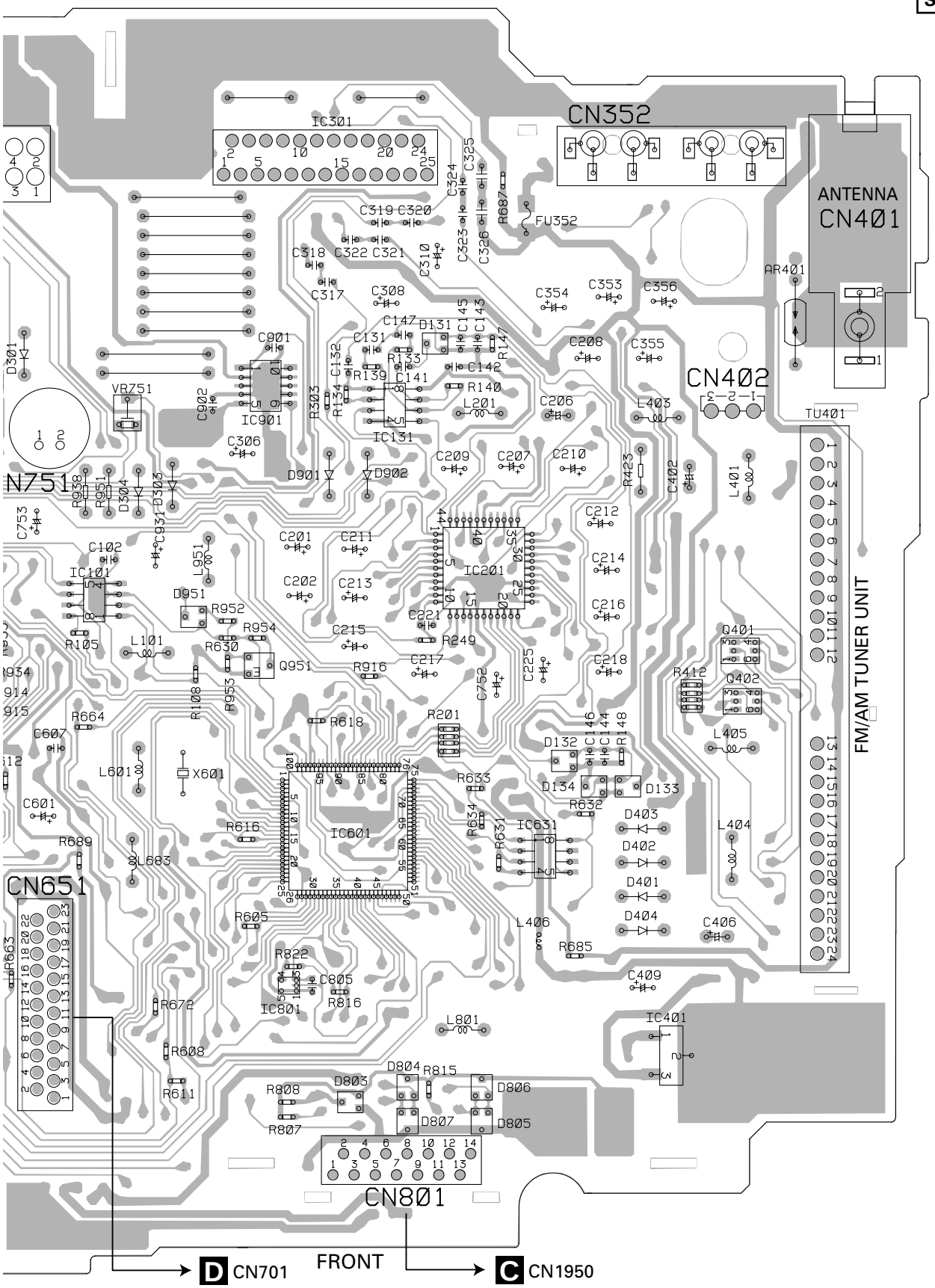
1. The parts mounted on this PCB include all necessary parts for several destination. For further information for respective destinations, be sure to check with the schematic diagram.
2. Viewpoint of PCB diagrams



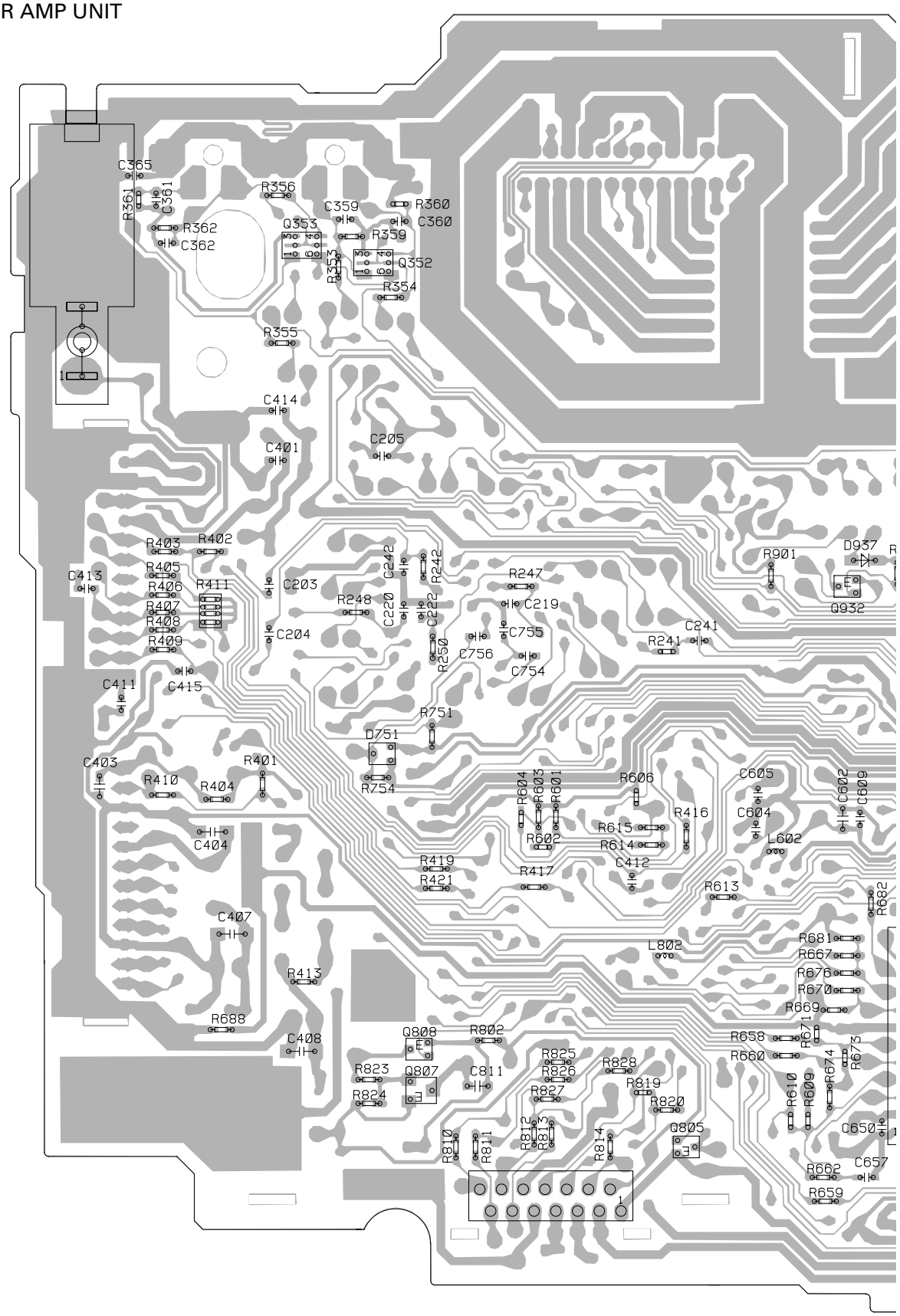
A TUNER AMP UNIT

IC, Q	ADJ
	CORD ASSY
IC301	
	CN151
	CN901
	CN101
	FU151
	C307
Q921	
	C923
	L301
	R111
	R113
	D302
	D301
	R902
Q911	
	D921
IC901	
Q923 IC131	
	CN351
	CN75
	FU351
	R924
	C351
	C352
	C751
	C753
IC101 IC201	
	D912
	D982
	D981
	R302
Q301	
Q931	
Q401	
	C921
	R939
	D931
	Q931
	R935
	C914
	D932
	R301
Q651 Q951	
Q982 Q402	
	Q651
	Q982
	R304
	R981
	R932
	R933
	R934
	R914
	R915
	R651
	C911
	D911
	D651
	R666
	R684
	C607
	R665
	R612
	R652
IC602	
	IC602
IC631	
IC601	
IC652	
	C651
	L651
	C603
	C601
	D650
	IC652
	R649
	C653
	C656
	R655
	CN65
	C644
	R678
	R648
IC653	
	C658
	R663
Q803	
	L853
	Q803
IC801	
IC401	
Q851	
	Q851
	L852
	D808
	R817
	R818
	C851
	D851
	R853
	R852
	R809
	C859
	BZ641
	S802
	C855
	C857
	DSENS

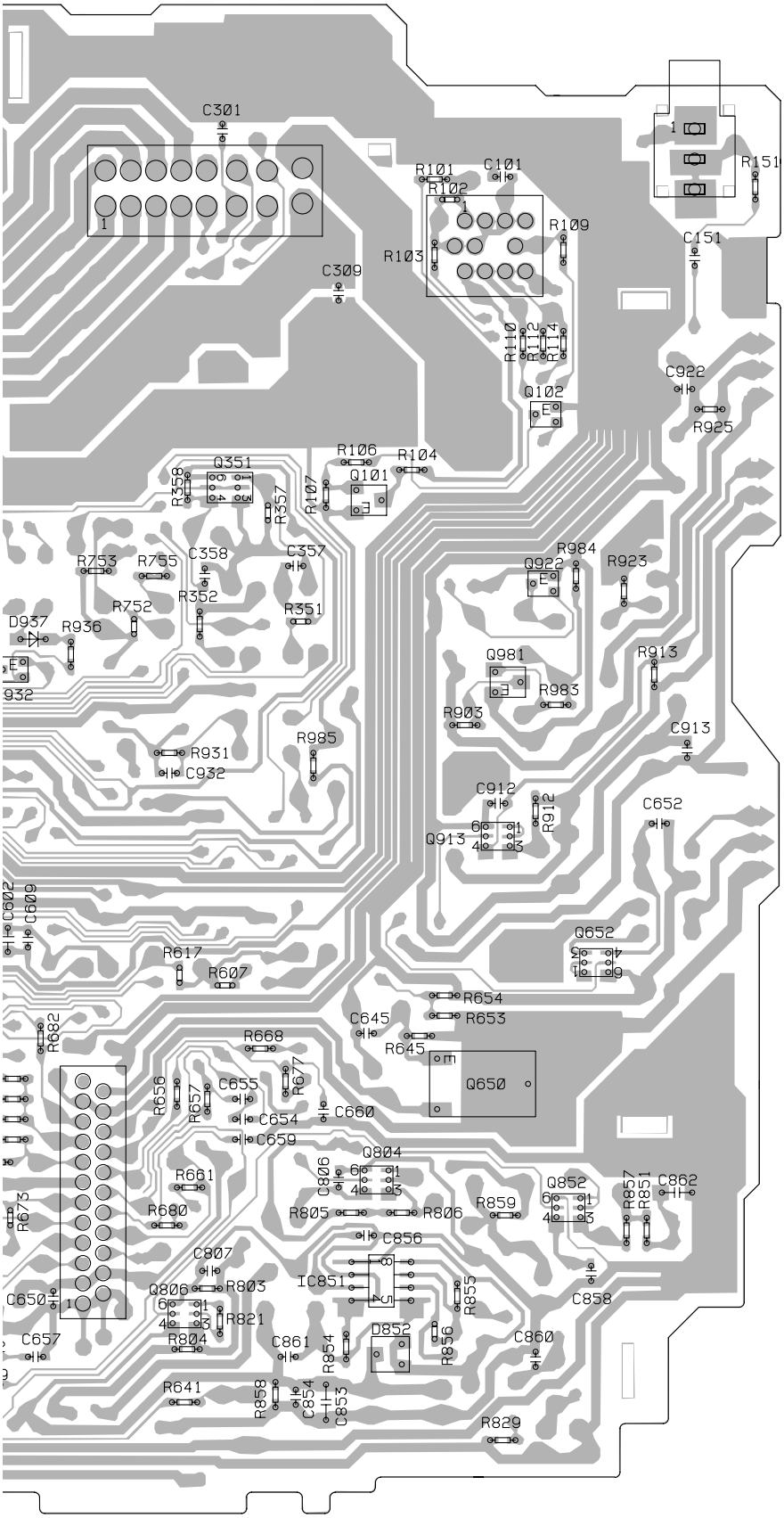
SIDE A


CN352
ANTENNA
CN401
CN402
IC301
FU352
AR401
TU401
FM/AM TUNER UNIT
VR751
N751
IC901
IC131
IC201
IC101
IC601
IC631
IC401
IC801
CN651
CN801
D CN701
FRONT
C CN1950

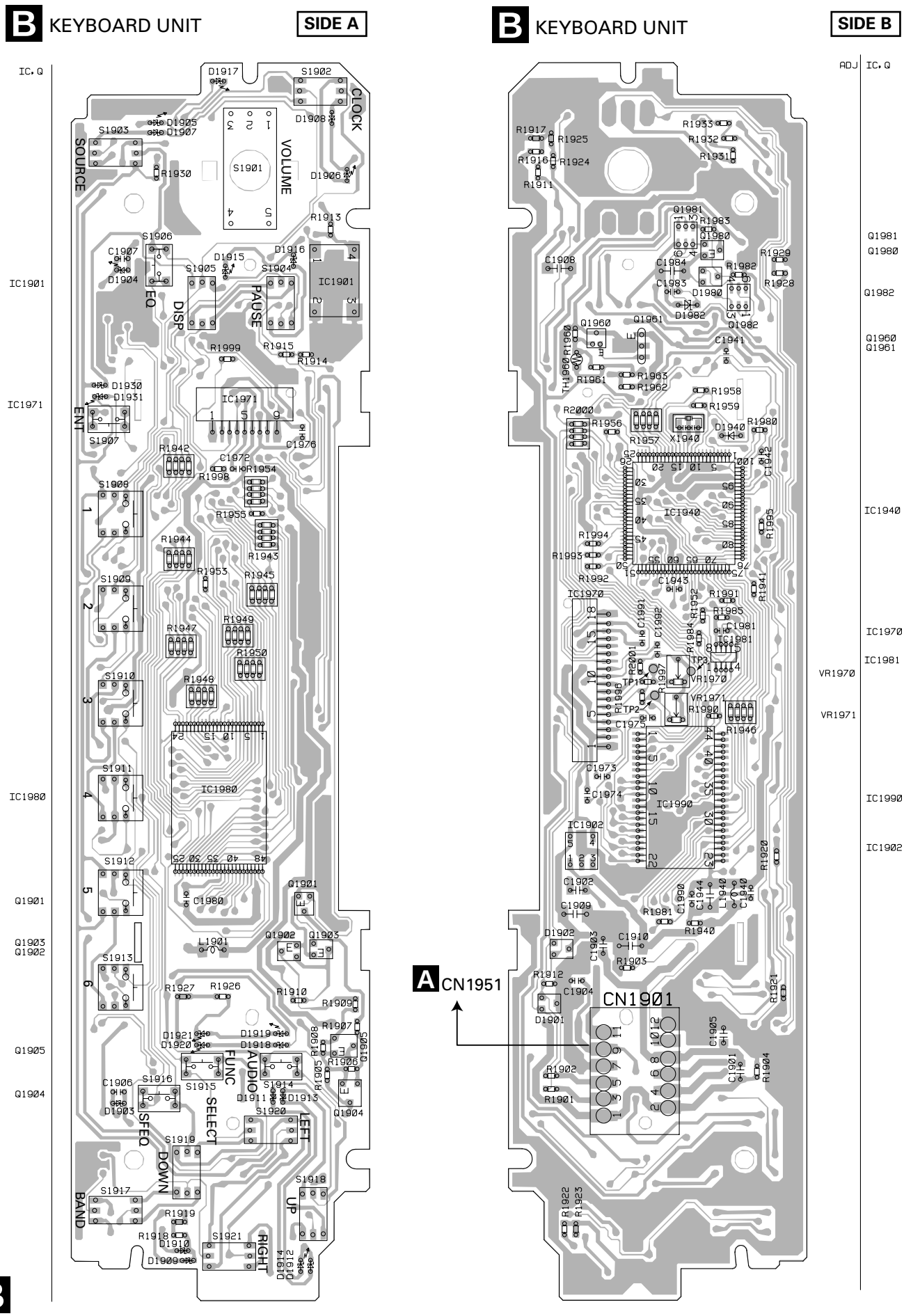
A TUNER AMP UNIT



SIDE B


C301
R101
C101
R102
R109
R103
C309
R151
C151
R110
R112
R114
C922
R925
Q102
R106
R104
Q101
Q351
R358
R357
R107
R753
R755
C358
C357
R352
R752
R351
D937
R936
R984
Q922
R923
Q981
R913
R983
R903
R985
R931
C932
C913
C912
R912
C652
Q913
C602
C609
R617
R607
Q652
R654
R653
C645
R668
R645
Q650
R682
R656
R657
C655
R677
C654
C660
C659
Q804
R661
C806
Q852
R857
R851
C862
R673
R680
R805
R806
R859
C856
C807
IC851
R855
C858
Q806
R803
R821
C650
C657
R804
C861
R854
D852
R856
C860
R641
R858
C854
C853
R829
IC, Q
Q353
Q352
Q102
Q351
Q101
Q922
Q981
Q932
Q913
Q652
Q650
Q804
Q852
Q808
Q807
IC851
Q805
Q806

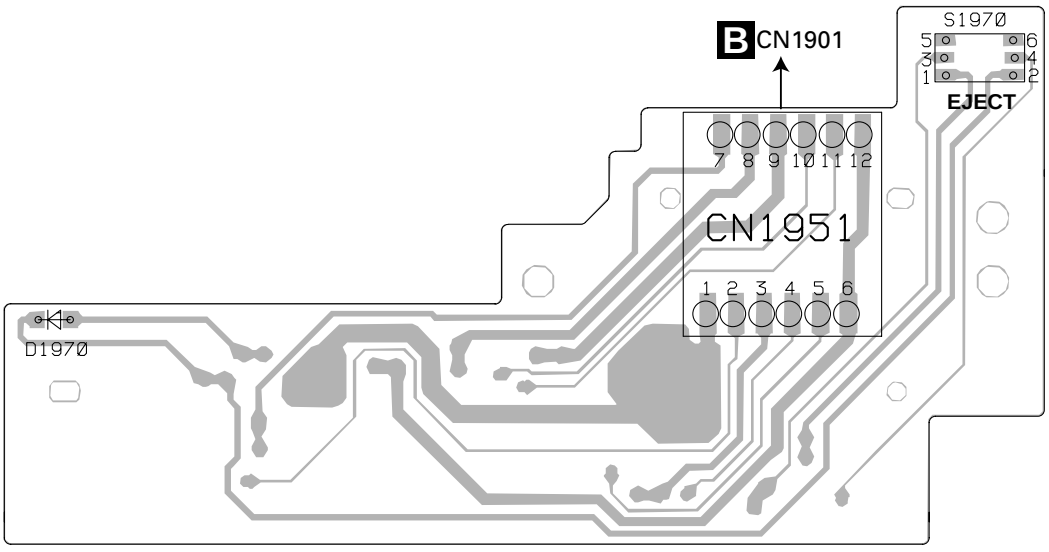
4.2 KEYBOARD UNIT



4.3 PANEL UNIT

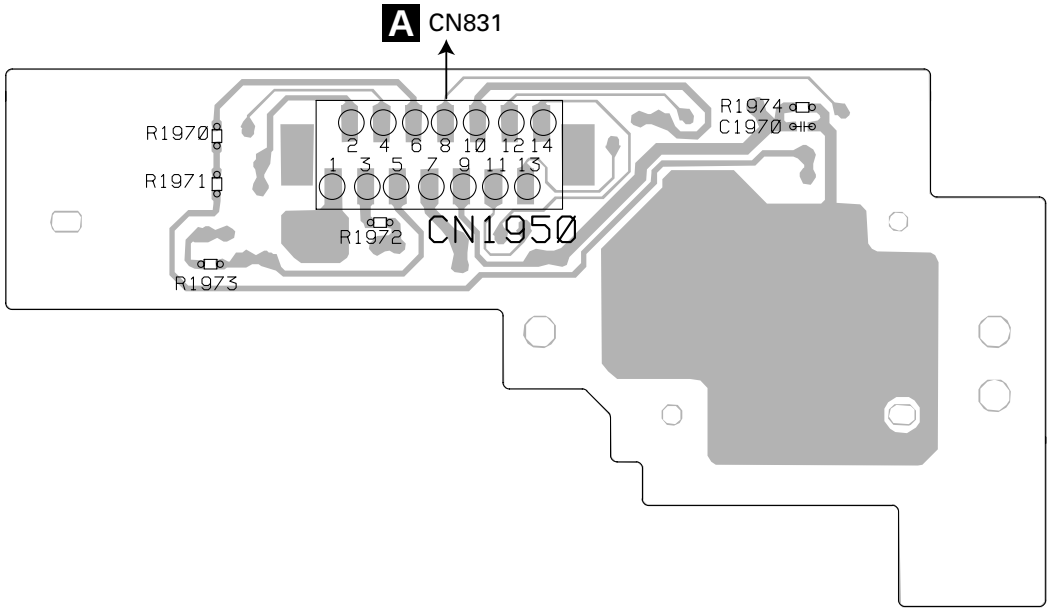
C PANEL UNIT

SIDE A



C PANEL UNIT

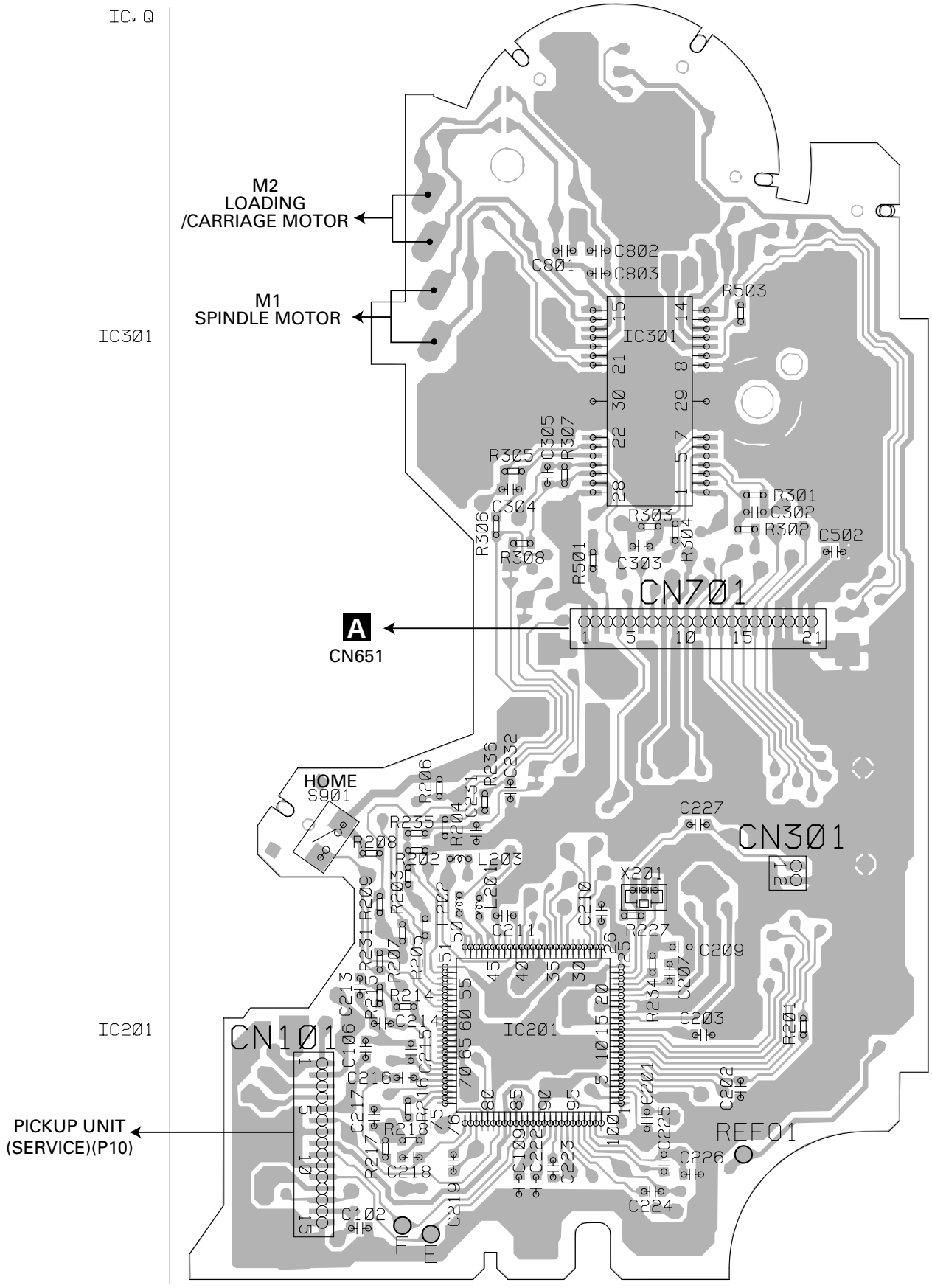
SIDE B



4.4 CD MECHANISM MODULE

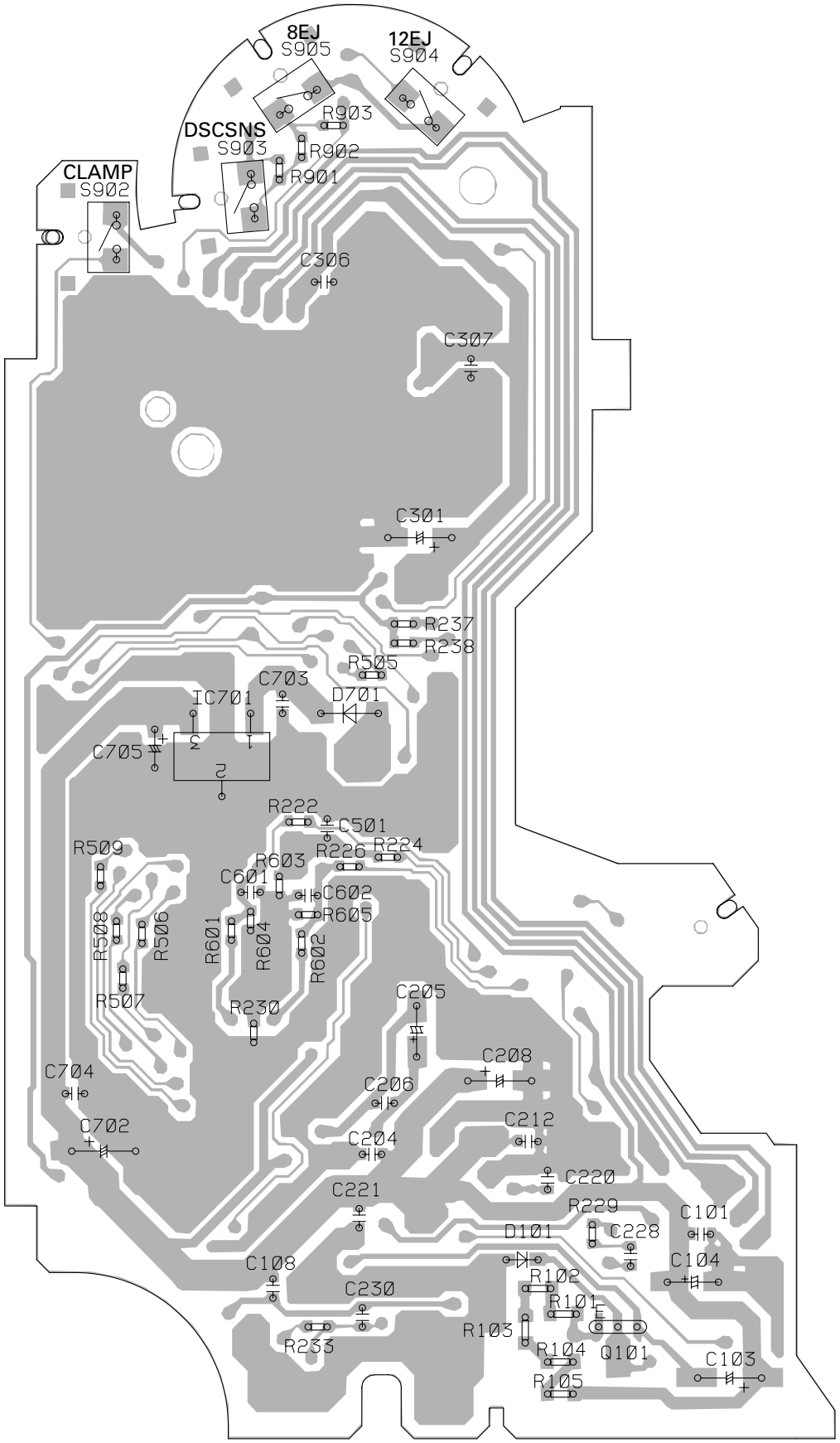
D CD CORE UNIT(S10)

SIDE A



D CD CORE UNIT(S10)

SIDE B



IC, Q

IC701

Q101

5. ELECTRICAL PARTS LIST

NOTE:

- Parts whose parts numbers are omitted are subject to being not supplied.
- The part numbers shown below indicate chip components.

Chip Resistor

RS1/○S○○○J,RS1/○○S○○○J

Chip Capacitor (except for CQS.....)

CKS....., CCS....., CSZS.....

A Unit Number : CWM8598(DEH-P650)
Unit Number : CWM8599(DEH-P6500)
Unit Name : Tuner Amp Unit

MISCELLANEOUS

=====Circuit Symbol and No.		===Part Name	Part No.
IC	101	IC	HA12187FP
IC	131	IC	NJM4558MD
IC	201	IC	PML009A
IC	301	IC	PAL007A
IC	401	IC	NJM2391DL1-33
IC	601	IC	PD5807A
IC	602	IC	S-80835ANUP-EDZ
IC	652	IC	TC7SET08FU
IC	653	IC	TC7SET08FU
IC	801	IC	TC7SET08FU
IC	851	IC	NJM2360M
Q	101	Transistor	2SA1037K
Q	102	Transistor	DTC114EU
Q	301	Transistor	DTC124EU
Q	351	Transistor	IMH3A
Q	352	Transistor	IMH3A
Q	353	Transistor	IMH3A
Q	651	Transistor	2SD2396
Q	652	Transistor	IMD2A
Q	803	Transistor	2SD1767
Q	804	Transistor	IMD2A
Q	805	Transistor	DTC143EU
Q	807	Transistor	2SA1037K
Q	808	Transistor	DTC114EU
Q	851	Transistor	2SD1760F5
Q	852	Transistor	IMD2A
Q	911	Transistor	2SD2396
Q	913	Transistor	IMD2A
Q	921	Transistor	2SD2396
Q	922	Transistor	DTC114EU
Q	923	Transistor	2SB1243
Q	931	Transistor	IMX1
Q	932	Transistor	DTC114EU
Q	951	Transistor	2SA1037K
Q	981	Transistor	2SC2412K
Q	982	Transistor	IMD2A
D	131	Diode Network	DA204U
D	132	Diode Network	DA204U
D	133	Diode	DAN202U
D	134	Diode	DAP202U
D	301	Diode	S5688G
D	302	Diode	S5688G
D	303	Diode	S5688G
D	304	Diode	S5688G
D	401	Diode	S5688G
D	402	Diode	S5688G
D	403	Diode	S5688G
D	651	Diode	HZS9L(B1)

=====Circuit Symbol and No.		===Part Name	Part No.
D	803	Diode Network	DA204U
D	804	Diode	DAN202U
D	805	Diode	DAP202U
D	806	Diode	DAN202U
D	807	Diode	DAP202U
D	808	Diode	HZS11L(A1)
D	851	Diode	HZS11L(A1)
D	852	Diode	RB411D
D	911	Diode	S5688G
D	912	Diode	HZS6L(B2)
D	921	Diode	HZS9L(B3)
D	931	Diode	HZS7L(A1)
D	932	Diode	HZS7L(C3)
D	937	Diode	MA110
D	951	Diode	DAN202U
D	981	Diode	DAN202U
D	982	Diode	HZS9L(A2)
L	101	Inductor	LAU2R2K
L	201	Ferri-Inductor	LAU4R7K
L	301	Choke Coil 600µH	CTH1280
L	401	Ferri-Inductor	LAU4R7K
L	403	Inductor	LAU1R0K
L	404	Inductor	LAU1R0K
L	406	Inductor	CTF1385
L	601	Ferri-Inductor	LAU100K
L	651	Inductor	CTF1382
L	801	Inductor	LAU2R2K
L	802	Inductor	CTF1382
L	852	Inductor	CTF1510
L	951	Inductor	LAU2R2K
X	601	Radiator	CSS1599
S	802	Switch(DSENSE)	CSN1039
		FM/AM Tuner Unit	CWE1646
BZ	641	Buzzer	CPV1062
AR	401	Surge Protector	DSP-201M
		Fuse 10A	CEK1208

RESISTORS

R	101	RS1/16S101J
R	102	RS1/16S620J
R	103	RS1/16S101J
R	104	RS1/16S222J
R	105	RS1/16S103J
R	106	RS1/16S472J
R	107	RS1/16S223J
R	108	RS1/16S472J
R	109	RS1/16S821J
R	110	RS1/16S821J
R	111	RS1/16S223J
R	112	RS1/16S223J
R	113	RS1/16S102J
R	114	RS1/16S102J
R	133	RS1/16S563J

=====Circuit Symbol and No.		===Part Name	Part No.
---	------	----------	----------
R	134		RS1/16S104J
R	139		RS1/16S563J
R	140		RS1/16S104J
R	147		RS1/16S474J
R	148		RS1/16S474J
R	201		RAB4C102J
R	241		RS1/16S0R0J
R	242		RS1/16S0R0J
R	247		RS1/16S101J
R	248		RS1/16S101J
R	249		RS1/16S101J
R	250		RS1/16S101J
R	301		RS1/16S103J
R	302		RS1/16S103J
R	303		RS1/16S153J
R	304		RS1/16S331J
R	351		RS1/16S821J
R	352		RS1/16S821J
R	353		RS1/16S821J
R	354		RS1/16S821J
R	355		RS1/16S821J
R	356		RS1/16S821J
R	357		RS1/16S223J
R	358		RS1/16S223J
R	359		RS1/16S223J
R	360		RS1/16S223J
R	361		RS1/16S223J
R	362		RS1/16S223J
R	403		RS1/16S681J
R	404		RS1/16S0R0J
R	405		RS1/16S681J
R	406		RS1/16S681J
R	407		RS1/16S681J
R	408		RS1/16S681J
R	410		RS1/16S681J
R	413		RS1/16S0R0J
R	416		RS1/16S681J
R	417		RS1/16S681J
R	419		RS1/16S681J
R	421		RS1/16S681J
R	423		RD1/4PU0R0J
R	601	(DEH-P650)	RS1/16S104J
R	602	(DEH-P6500)	RS1/16S104J
R	603		RS1/16S104J
R	606		RS1/16S104J
R	607		RS1/16S822J
R	614		RS1/16S0R0J
R	616		RS1/16S473J
R	617		RS1/16S102J
R	618		RS1/16S104J
R	619		RS1/16S0R0J
R	630		RS1/16S104J
R	632		RS1/16S104J
R	641		RS1/16S102J
R	648		RS1/16S221J
R	649		RS1/16S221J
R	651		RD1/4PU221J
R	652		RD1/4PU221J
R	653		RS1/16S472J
R	654		RS1/16S222J
R	655		RS1/16S102J
R	656		RS1/16S0R0J
R	657		RS1/16S0R0J
R	658		RS1/16S102J
R	659		RS1/16S221J
R	660		RS1/16S221J
R	661		RS1/16S221J
R	662		RS1/16S221J

=====Circuit Symbol and No.		===Part Name	Part No.
---	------	----------	----------
R	663		RS1/16S102J
R	664		RS1/16S221J
R	665		RD1/4PU0R0J
R	667		RS1/16S221J
R	668		RS1/16S222J
R	670		RS1/16S221J
R	673		RS1/16S104J
R	677		RS1/16S104J
R	682		RS1/16S221J
R	684		RS1/16S0R0J
R	689		RS1/16S0R0J
R	802		RS1/16S222J
R	803		RS1/16S472J
R	804		RS1/16S1R0J
R	805		RS1/16S391J
R	806		RS1/16S391J
R	807		RS1/16S473J
R	808		RS1/16S473J
R	809		RS1/16S102J
R	810		RS1/16S222J
R	811		RS1/16S222J
R	812		RS1/16S222J
R	813		RS1/16S222J
R	814		RS1/16S222J
R	815		RS1/16S473J
R	816		RS1/16S104J
R	817		RD1/4PU391J
R	818		RS1/16S104J
R	819		RS1/16S222J
R	820		RS1/16S222J
R	823		RS1/16S102J
R	824		RS1/16S473J
R	825		RS1/16S102J
R	826		RS1/16S102J
R	827		RS1/16S102J
R	828		RS1/16S102J
R	851		RS1/16S331J
R	852		RD1/4PU302J
R	853		RD1/4PU302J
R	854		RS1/16S121J
R	855		RS1/16S391J
R	856		RS1/16S1R0J
R	857		RS1/16S331J
R	859		RS1/16S0R0J
R	903		RS1/16S223J
R	912		RS1/16S222J
R	913		RS1/16S223J
R	914		RS1/16S104J
R	915		RS1/16S104J
R	916		RS1/16S104J
R	923		RS1/16S103J
R	924		RD1/4PU122J
R	925		RS1/16S182J
R	931		RS1/16S472J
R	932		RS1/16S473J
R	933		RS1/16S103J
R	934		RS1/16S473J
R	935		RS1/16S104J
R	936		RS1/16S103J
R	938		RD1/4PU102J
R	939		RD1/4PU102J
R	951		RD1/4PU153J
R	952		RS1/16S472J
R	953		RS1/16S472J
R	954		RS1/16S102J
R	983		RS1/16S223J
R	984		RS1/16S473J

				Part No.
R	985			RS1/16S102J

CAPACITORS

				Part No.
C	101			CKSRYB104K16
C	102			CKSRYB473K25
C	131			CKSRYB104K16
C	132			CKSRYB104K16
C	141			CKSRYB104K16
C	142			CKSRYB103K50
C	143			CKSRYB474K10
C	144			CKSRYB474K10
C	145			CCSRCH101J50
C	146			CCSRCH101J50
C	147			CKSRYB104K16
C	201			CEJQ1R0M50
C	202			CEJQ1R0M50
C	203			CKSRYB104K16
C	204			CKSRYB104K16
C	205			CKSRYB104K16
C	206			CEJQ470M16
C	207			CEJQ1R0M50
C	208			CEJQ1R0M50
C	209			CEJQ1R0M50
C	210			CEJQ1R0M50
C	211			CEJQ4R7M35
C	212			CEJQ4R7M35
C	213			CEJQ4R7M35
C	214			CEJQ4R7M35
C	215			CEJQ4R7M35
C	216			CEJQ4R7M35
C	217			CEJQ4R7M35
C	218			CEJQ4R7M35
C	219			CCSRCH120J50
C	220			CCSRCH120J50
C	221			CCSRCH120J50
C	222			CCSRCH120J50
C	225			CEJQ100M16
C	301			CKSRYB104K16
C	306			CEJQ330M10
C	307	3300µF/16V		CCH1486
C	309			CKSRYB104K16
C	310			CEJQ100M16
C	311			CKSYB475K16
C	312			CKSYB475K16
C	317			CKSRYB474K10
C	318			CKSRYB474K10
C	319			CKSRYB474K10
C	320			CKSRYB474K10
C	321			CKSRYB474K10
C	322			CKSRYB474K10
C	323			CKSRYB474K10
C	324			CKSRYB474K10
C	325			CKSQYB225K10
C	326			CKSQYB225K10
C	351			CEJQ4R7M35
C	352			CEJQ4R7M35
C	353			CEJQ4R7M35
C	354			CEJQ4R7M35
C	355			CEJQ4R7M35
C	356			CEJQ4R7M35
C	401			CKSRYB103K50
C	402			CEJQ101M10
C	404			CKSYB475K10
C	406			CEJQ470M10
C	408			CKSYB475K10
C	409			CEJQ1R0M50
C	411			CCSRCH101J50
C	412			CCSRCH470J50
C	601			CEJQ4R7M35
C	602			CKSQYB105K16
C	603			CEJQ2R2M50
C	604			CCSRCH200J50
C	605			CCSRCH200J50
C	609			CCSRCH101J50
C	651			CEJQ101M10
C	652			CKSRYB473K25
C	653			CKSRYB473K25
C	656			CKSRYB473K25
C	657			CCSRCH470J50
C	755			CKSRYB104K16
C	805			CKSRYB473K25
C	806			CKSRYB473K25
C	807			CKSRYB473K25
C	811			CKSQYB105K16
C	812			CKSRYB474K10
C	851			CEJQ470M16
C	853	4.7µF		CCG1111
C	855			CEJQ100M25
C	856			CCSRCH331J50
C	857			CEJQ330M25
C	858			CKSRYB104K16
C	859			CEJQ101M10
C	860			CKSRYB104K16
C	861			CKSRYB223K50
C	911	470µF/16V		CCH1331
C	912			CKSRYB472K50
C	913			CKSRYB103K50
C	914			CEJQ470M10
C	921			CEJQ221M10
C	922			CKSRYB103K50
C	923			CEJQ101M16
C	931			CEJQ1R0M50

A Unit Number : CWM8601(DEH-P6550)
Unit Name : Tuner Amp Unit

MISCELLANEOUS

				Part No.
IC	101	IC		HA12187FP
IC	131	IC		NJM4558MD
IC	201	IC		PML009A
IC	301	IC		PAL007A
IC	401	IC		NJM2391DL1-33
IC	601	IC		PD5807A
IC	602	IC		S-80835ANUP-EDZ
IC	652	IC		TC7SET08FU
IC	653	IC		TC7SET08FU
IC	801	IC		TC7SET08FU
IC	851	IC		NJM2360M
Q	101	Transistor		2SA1037K
Q	102	Transistor		DTC114EU
Q	301	Transistor		DTC124EU
Q	351	Transistor		IMH3A
Q	352	Transistor		IMH3A
Q	353	Transistor		IMH3A
Q	651	Transistor		2SD2396
Q	652	Transistor		IMD2A
Q	803	Transistor		2SD1767
Q	804	Transistor		IMD2A
Q	805	Transistor		DTC143EU
Q	807	Transistor		2SA1037K
Q	808	Transistor		DTC114EU
Q	851	Transistor		2SD1760F5
Q	852	Transistor		IMD2A
Q	911	Transistor		2SD2396
Q	913	Transistor		IMD2A
Q	921	Transistor		2SD2396
Q	922	Transistor		DTC114EU

=====Circuit Symbol and No.		===Part Name	Part No.
Q	923	Transistor	2SB1243
Q	931	Transistor	IMX1
Q	932	Transistor	DTC114EU
Q	951	Transistor	2SA1037K
Q	981	Transistor	2SC2412K
Q	982	Transistor	IMD2A
D	131	Diode Network	DA204U
D	132	Diode Network	DA204U
D	133	Diode	DAN202U
D	134	Diode	DAP202U
D	301	Diode	S5688G
D	302	Diode	S5688G
D	303	Diode	S5688G
D	304	Diode	S5688G
D	401	Diode	S5688G
D	402	Diode	S5688G
D	403	Diode	S5688G
D	651	Diode	HZS9L(B1)
D	751	Diode	RB706F-40
D	803	Diode Network	DA204U
D	804	Diode	DAN202U
D	805	Diode	DAP202U
D	806	Diode	DAN202U
D	807	Diode	DAP202U
D	808	Diode	HZS11L(A1)
D	851	Diode	HZS11L(A1)
D	852	Diode	RB411D
D	911	Diode	S5688G
D	912	Diode	HZS6L(B2)
D	921	Diode	HZS9L(B3)
D	931	Diode	HZS7L(A1)
D	932	Diode	HZS7L(C3)
D	937	Diode	MA110
D	951	Diode	DAN202U
D	981	Diode	DAN202U
D	982	Diode	HZS9L(A2)
L	101	Inductor	LAU2R2K
L	201	Ferri-Inductor	LAU4R7K
L	301	Choke Coil 600µH	CTH1280
L	401	Ferri-Inductor	LAU4R7K
L	403	Inductor	LAU1R0K
L	404	Inductor	LAU1R0K
L	406	Inductor	CTF1385
L	601	Ferri-Inductor	LAU100K
L	651	Inductor	CTF1382
L	801	Inductor	LAU2R2K
L	802	Inductor	CTF1382
L	852	Inductor	CTF1510
L	951	Inductor	LAU2R2K
X	601	Radiator	CSS1599
S	802	Switch(DSENSE)	CSN1039
VR	751	Semi-fixed 10kΩ(B)	CCP1229
		FM/AM Tuner Unit	CWE1646
BZ	641	Buzzer	CPV1062
AR	401	Surge Protector	DSP-201M
CN	751	Microphone	CPM1011
		Fuse 10A	CEK1208

RESISTORS

R	101		RS1/16S101J
R	102		RS1/16S620J
R	103		RS1/16S101J
R	104		RS1/16S222J
R	105		RS1/16S103J
R	106		RS1/16S472J
R	107		RS1/16S223J
R	108		RS1/16S472J
R	109		RS1/16S821J
R	110		RS1/16S821J
R	111		RS1/16S223J
R	112		RS1/16S223J
R	113		RS1/16S102J
R	114		RS1/16S102J
R	133		RS1/16S563J
R	134		RS1/16S104J
R	139		RS1/16S563J
R	140		RS1/16S104J
R	147		RS1/16S474J
R	148		RS1/16S474J
R	201		RAB4C102J
R	241		RS1/16S0R0J
R	242		RS1/16S0R0J
R	247		RS1/16S101J
R	248		RS1/16S101J
R	249		RS1/16S101J
R	250		RS1/16S101J
R	301		RS1/16S103J
R	302		RS1/16S103J
R	303		RS1/16S153J
R	304		RS1/16S331J
R	351		RS1/16S821J
R	352		RS1/16S821J
R	353		RS1/16S821J
R	354		RS1/16S821J
R	355		RS1/16S821J
R	356		RS1/16S821J
R	357		RS1/16S223J
R	358		RS1/16S223J
R	359		RS1/16S223J
R	360		RS1/16S223J
R	361		RS1/16S223J
R	362		RS1/16S223J
R	403		RS1/16S681J
R	404		RS1/16S0R0J
R	405		RS1/16S681J
R	406		RS1/16S681J
R	407		RS1/16S681J
R	408		RS1/16S681J
R	410		RS1/16S681J
R	413		RS1/16S0R0J
R	416		RS1/16S681J
R	417		RS1/16S681J
R	419		RS1/16S681J
R	421		RS1/16S681J
R	423		RD1/4PU0R0J
R	601		RS1/16S104J
R	604		RS1/16S104J
R	606		RS1/16S104J
R	607		RS1/16S822J
R	614		RS1/16S0R0J
R	616		RS1/16S473J
R	617		RS1/16S102J
R	618		RS1/16S104J
R	630		RS1/16S104J
R	632		RS1/16S104J
R	641		RS1/16S102J
R	648		RS1/16S221J
R	649		RS1/16S221J
R	651		RD1/4PU221J
R	652		RD1/4PU221J
R	653		RS1/16S472J
R	654		RS1/16S222J
R	655		RS1/16S102J
R	656		RS1/16S0R0J
R	657		RS1/16S0R0J
R	658		RS1/16S102J
R	659		RS1/16S221J
R	660		RS1/16S221J

			=====Circuit Symbol and No.===Part Name	Part No.
	R	661		RS1/16S221J
	R	662		RS1/16S221J
	R	663		RS1/16S102J
	R	664		RS1/16S221J
	R	665		RD1/4PU0R0J
	R	667		RS1/16S221J
	R	668		RS1/16S222J
	R	670		RS1/16S221J
	R	673		RS1/16S104J
	R	677		RS1/16S104J
	R	682		RS1/16S221J
	R	684		RS1/16S0R0J
	R	689		RS1/16S0R0J
	R	751		RS1/16S104J
	R	752		RS1/16S222J
	R	753		RS1/16S561J
	R	754		RS1/16S104J
	R	802		RS1/16S222J
	R	803		RS1/16S472J
	R	804		RS1/16S1R0J
	R	805		RS1/16S391J
	R	806		RS1/16S391J
	R	807		RS1/16S473J
	R	808		RS1/16S473J
	R	809		RS1/16S102J
	R	810		RS1/16S222J
	R	811		RS1/16S222J
	R	812		RS1/16S222J
	R	813		RS1/16S222J
	R	814		RS1/16S222J
	R	815		RS1/16S473J
	R	816		RS1/16S104J
	R	817		RD1/4PU391J
	R	818		RS1/16S104J
	R	819		RS1/16S222J
	R	820		RS1/16S222J
	R	823		RS1/16S102J
	R	824		RS1/16S473J
	R	825		RS1/16S102J
	R	826		RS1/16S102J
	R	827		RS1/16S102J
	R	828		RS1/16S102J
	R	851		RS1/16S331J
	R	852		RD1/4PU302J
	R	853		RD1/4PU302J
	R	854		RS1/16S121J
	R	855		RS1/16S391J
	R	856		RS1/16S1R0J
	R	857		RS1/16S331J
	R	859		RS1/16S0R0J
	R	903		RS1/16S223J
	R	912		RS1/16S222J
	R	913		RS1/16S223J
	R	914		RS1/16S104J
	R	915		RS1/16S104J
	R	916		RS1/16S104J
	R	923		RS1/16S103J
	R	924		RD1/4PU122J
	R	925		RS1/16S182J
	R	931		RS1/16S472J
	R	932		RS1/16S473J
	R	933		RS1/16S103J
	R	934		RS1/16S473J
	R	935		RS1/16S104J
	R	936		RS1/16S103J
	R	938		RD1/4PU102J
	R	939		RD1/4PU102J

			=====Circuit Symbol and No.===Part Name	Part No.
	R	951		RD1/4PU153J
	R	952		RS1/16S472J
	R	953		RS1/16S472J
	R	954		RS1/16S102J
	R	983		RS1/16S223J
	R	984		RS1/16S473J
	R	985		RS1/16S102J

CAPACITORS

	C	101		CKSRYB104K16
	C	102		CKSRYB473K25
	C	131		CKSRYB104K16
	C	132		CKSRYB104K16
	C	141		CKSRYB104K16
	C	142		CKSRYB103K50
	C	143		CKSRYB474K10
	C	144		CKSRYB474K10
	C	145		CCSRCH101J50
	C	146		CCSRCH101J50
	C	147		CKSRYB104K16
	C	201		CEJQ1R0M50
	C	202		CEJQ1R0M50
	C	203		CKSRYB104K16
	C	204		CKSRYB104K16
	C	205		CKSRYB104K16
	C	206		CEJQ470M16
	C	207		CEJQ1R0M50
	C	208		CEJQ1R0M50
	C	209		CEJQ1R0M50
	C	210		CEJQ1R0M50
	C	211		CEJQ4R7M35
	C	212		CEJQ4R7M35
	C	213		CEJQ4R7M35
	C	214		CEJQ4R7M35
	C	215		CEJQ4R7M35
	C	216		CEJQ4R7M35
	C	217		CEJQ4R7M35
	C	218		CEJQ4R7M35
	C	219		CCSRCH120J50
	C	220		CCSRCH120J50
	C	221		CCSRCH120J50
	C	222		CCSRCH120J50
	C	225		CEJQ100M16
	C	301		CKSRYB104K16
	C	306		CEJQ330M10
	C	307	3300µF/16V	CCH1486
	C	309		CKSRYB104K16
	C	310		CEJQ100M16
	C	311		CKSYB475K16
	C	312		CKSYB475K16
	C	317		CKSRYB474K10
	C	318		CKSRYB474K10
	C	319		CKSRYB474K10
	C	320		CKSRYB474K10
	C	321		CKSRYB474K10
	C	322		CKSRYB474K10
	C	323		CKSRYB474K10
	C	324		CKSRYB474K10
	C	325		CKSQYB225K10
	C	326		CKSQYB225K10
	C	351		CEJQ4R7M35
	C	352		CEJQ4R7M35
	C	353		CEJQ4R7M35
	C	354		CEJQ4R7M35
	C	355		CEJQ4R7M35
	C	356		CEJQ4R7M35
	C	401		CKSRYB103K50
	C	402		CEJQ101M10

=====Circuit Symbol and No.		===Part Name	Part No.
C	404		CKSYB475K10
C	406		CEJQ470M10
C	408		CKSYB475K10
C	409		CEJQ1R0M50
C	411		CCSRCH101J50
C	412		CCSRCH470J50
C	601		CEJQ4R7M35
C	602		CKSQYB105K16
C	603		CEJQ2R2M50
C	604		CCSRCH200J50
C	605		CCSRCH200J50
C	609		CCSRCH101J50
C	651		CEJQ101M10
C	652		CKSRYB473K25
C	653		CKSRYB473K25
C	656		CKSRYB473K25
C	657		CCSRCH470J50
C	751		CEJQ100M16
C	752		CEJQ100M16
C	753		CEJQ220M10
C	754		CKSRYB474K10
C	756		CKSRYB474K10
C	805		CKSRYB473K25
C	806		CKSRYB473K25
C	807		CKSRYB473K25
C	811		CKSQYB105K16
C	812		CKSRYB474K10
C	851		CEJQ470M16
C	853	4.7µF	CCG1111
C	855		CEJQ100M25
C	856		CCSRCH331J50
C	857		CEJQ330M25
C	858		CKSRYB104K16
C	859		CEJQ101M10
C	860		CKSRYB104K16
C	861		CKSRYB223K50
C	911	470µF/16V	CCH1331
C	912		CKSRYB472K50
C	913		CKSRYB103K50
C	914		CEJQ470M10
C	921		CEJQ221M10
C	922		CKSRYB103K50
C	923		CEJQ101M16
C	931		CEJQ1R0M50

D Unit Number : CWX2708
Unit Name : CD Core Unit(S10)

MISCELLANEOUS

IC	201	IC	UPD63712GC
IC	301	IC	BA5996FP
IC	701	IC	NJM2391DL1-33
Q	101	Transistor	2SB1132
D	101	Diode	1SS355
D	701	Diode	1SR154-400
X	201	Ceramic Resonator 16.934MHz	CSS1603
S	901	Spring Switch(HOME)	CSN1051
S	902	Spring Switch(CLAMP)	CSN1051
S	903	Spring Switch(DSCSNS)	CSN1052
S	904	Spring Switch(12EJ)	CSN1051
S	905	Spring Switch(8EJ)	CSN1051

RESISTORS

R	101		RS1/10S1R5J
R	102		RS1/10S1R5J
R	103		RS1/10S1R5J
R	104		RS1/10S1R5J
R	105		RS1/10S1R5J

=====Circuit Symbol and No.		===Part Name	Part No.
R	201		RS1/16S102J
R	202		RS1/16S1002D
R	203		RS1/16S1002D
R	204		RS1/16S1002D
R	205		RS1/16S1002D
R	206		RS1/16S1002D
R	207		RS1/16S1002D
R	208		RS1/16S1002D
R	209		RS1/16S1002D
R	214		RS1/16S103J
R	215		RS1/16S393J
R	216		RS1/16S122J
R	217		RS1/16S562J
R	218		RS1/16S472J
R	234		RS1/16S0R0J
R	235		RS1/16S103J
R	236		RS1/16S103J
R	301		RS1/16S183J
R	302		RS1/16S822J
R	303		RS1/16S183J
R	304		RS1/16S822J
R	305		RS1/16S183J
R	306		RS1/16S183J
R	307		RS1/16S183J
R	308		RS1/16S183J
R	501		RS1/16S102J
R	503		RS1/16S102J
R	505		RS1/16S102J
R	506		RS1/16S221J
R	507		RS1/16S221J
R	508		RS1/16S221J
R	509		RS1/16S221J
R	601		RS1/16S101J
R	602		RS1/16S101J
R	603		RS1/16S0R0J
R	901		RS1/16S104J
R	902		RS1/16S473J
R	903		RS1/16S273J

CAPACITORS

C	101		CKSRYB104K16
C	102		CKSRYB104K16
C	103	100µF/16V	CCH1504
C	104	47µF/6.3V	CCH1506
C	106		CCSRCH101J50
C	108		CKSRYB224K16
C	109		CKSRYB224K16
C	201		CKSRYB104K16
C	202		CKSRYB471K50
C	203		CKSRYB104K16
C	205	22µF/6.3V	CCH1507
C	206		CKSRYB103K25
C	207		CKSRYB104K16
C	208	100µF/6.3V	CCH1505
C	209		CKSRYB104K16
C	210		CKSRYB104K16
C	211		CKSRYB104K16
C	212		CKSRYB104K16
C	213		CKSRYB332K50
C	214		CKSRYB473K25
C	215		CKSRYB104K16
C	216		CKSRYB103K25
C	217		CCSRCH560J50
C	218		CCSRCH5R0C50
C	219		CKSRYB104K16
C	220		CKSRYB104K16
C	221		CKSRYB104K16
C	222		CKSRYB103K25
C	223		CCSRCH680J50

=====Circuit Symbol and No.		===Part Name	Part No.	=====Circuit Symbol and No.		===Part Name	Part No.
C	224		CCSRCH470J50			OEL Unit	MXS8045
C	225		CKSRYB682K50	RESISTORS			
C	231		CKSRYB102K50				
C	232		CKSRYB102K50	R	1901		RS1/16S222J
C	301	100µF/16V	CCH1504	R	1902		RS1/16S222J
C	302		CCSRCH221J50	R	1903		RS1/16S473J
				R	1905		RS1/16S0R0J
C	303		CCSRCH221J50	R	1911		RS1/16S103J
C	304		CKSRYB472K50				
C	305		CKSRYB103K25	R	1912		RS1/16S682J
C	306		CKSRYB104K16	R	1913		RS1/16S121J
C	501		CKSRYB103K25	R	1914		RS1/16S184J
				R	1915		RS1/16S2R2J
C	502		CKSRYB103K25	R	1916		RS1/16S560J
C	702	100µF/16V	CCH1504				
C	703		CKSRYB224K16	R	1918		RS1/16S181J
C	704		CKSRYB104K16	R	1920		RS1/16S560J
C	705	10µF/6.3V	CCH1470	R	1922		RS1/16S181J
				R	1924		RS1/16S560J
				R	1926		RS1/16S560J
B Unit Number : CWM8604(DEH-P650)							
Unit Number : CWM8603(DEH-P6500)				R	1928		RS1/16S151J
Unit Number : CWM8603(DEH-P6550)				R	1929		RS1/16S151J
Unit Name : Keyboard Unit				R	1930		RS1/16S680J
				R	1932		RS1/16S181J
MISCELLANEOUS				R	1933		RS1/16S181J
IC	1901		RS-140	R	1940		RS1/16S222J
IC	1902	IC	S-818A33AUC-BGN	R	1941		RS1/16S101J
IC	1940	IC	PD5809A	R	1942		RAB4C101J
IC	1990	IC(DEH-P650)	PD8108A	R	1943		RAB4C101J
IC	1990	IC(DEH-P6500, P6550)	PD8107A	R	1944		RAB4C101J
Q	1960	Transistor	2SC4617	R	1945		RAB4C101J
Q	1961	Transistor	2SD1664	R	1946		RAB4C101J
D	1903	LED	CL-195PG-CD	R	1947		RAB4C101J
D	1904	LED	CL-195PG-CD	R	1948		RAB4C101J
D	1905	LED	CL-195PG-CD	R	1949		RAB4C101J
D	1906	LED	CL-195PG-CD	R	1950		RAB4C101J
D	1914	LED	CL-195PG-CD	R	1952		RS1/16S101J
D	1915	LED	CL-195PG-CD	R	1954		RAB4C473J
D	1917	LED	CL-195PG-CD	R	1955		RS1/16S473J
D	1919	LED	CL-195PG-CD	R	1956		RS1/16S103J
D	1921	LED	CL-195PG-CD	R	1957		RAB4C101J
D	1931	LED	CL-195PG-CD	R	1958		RS1/16S473J
D	1940	Diode	1SS355	R	1959		RS1/16S154J
L	1901	Inductor	CTF1530	R	1960		RS1/16S223J
L	1940	Inductor	CTF1530	R	1961		RS1/16S683J
TH	1960	Thermistor	CCX1037	R	1962		RS1/16S392J
X	1940	Radiator 10.0MHz	CSS1577	R	1963		RS1/16S393J
S	1901	Encoder	CSD1059	R	1980		RS1/16S473J
S	1902	Push Switch	CSG1112	R	1984		RS1/16S0R0J
S	1903	Push Switch	CSG1112	R	1991		RS1/16S101J
S	1904	Push Switch	CSG1112	R	1992		RS1/16S101J
S	1905	Push Switch	CSG1112	R	1993		RS1/16S101J
S	1906	Push Switch	CSG1111	R	1994		RS1/16S101J
S	1907	Push Switch	CSG1111	R	1995		RS1/16S473J
S	1908	Switch	CSG1107	R	1996		RS1/16S332J
S	1909	Switch	CSG1107	R	1997		RS1/16S222J
S	1910	Switch	CSG1107	R	1998		RS1/16S102J
S	1911	Switch	CSG1107	R	1999		RS1/16S102J
S	1912	Switch	CSG1107	R	2000		RAB4C102J
S	1913	Switch	CSG1107				
				CAPACITORS			
S	1914	Push Switch	CSG1111				
S	1915	Push Switch	CSG1111	C	1908		CKSYF106Z10
S	1916	Push Switch	CSG1111	C	1909		CSZSR4R7M16
S	1917	Push Switch	CSG1112	C	1910		CSZSR4R7M10
S	1918	Push Switch	CSG1112	C	1940		CKSRYB103K50
				C	1941		CKSRYB473K25
S	1919	Push Switch	CSG1112				
S	1920	Push Switch	CSG1112	C	1942		CKSRYB103K50
S	1921	Push Switch	CSG1112	C	1943		CKSRYB103K50
VR	1970	Semi-fixed 15kΩ(B)	CCP1230	C	1944		CSZSR4R7M10
VR	1971	Semi-fixed 20kΩ(B)	CCP1231	C	1972		CKSRYB104K16

=====Circuit Symbol and No.		===Part Name	Part No.
C	1973		CKSRYB104K25
C	1974		CKSRYB104K25
C	1975		CKSRYB104K25
C	1976		CKSRYB104K25
C	1990		CKSRYB103K50
C	1991		CKSRYB104K25
C	1992		CKSRYB104K16

C Unit Number : CWM8758
Unit Name : Panel Unit

MISCELLANEOUS

D	1970	LED	CL220PGC
S	1970	Push Switch(EJECT)	CSG1112

RESISTORS

R	1970		RS1/16S101J
R	1971		RS1/16S101J
R	1972		RS1/16S0R0J

CAPACITORS

C	1970		CKSRYB104K16

Miscellaneous Parts List

		Pickup Unit(Service)(P10)	CXX1641
M	1	Motor Unit(SPINDLE)	CXB6007
M	2	Motor Unit(LOADING/CARRIAGE)	CXB8933

6. ADJUSTMENT

6.1 CD ADJUSTMENT

1) Cautions on adjustments

• In this product the single voltage (3.3V) is used for the regulator. The reference voltage is the REFO1 (1.65V) instead of the GND.
If you should mistakenly short the REFO1 with the GND during adjustment, accurate voltage will not be obtained, and the servo's misoperation will apply excessive shock to the pickup. To avoid such problems:
a. Do not mix up the REFO1 with the GND when connecting the (-) probe of measuring instruments. Especially on an oscilloscope, avoid connecting the (-) probe for CH1 to the GND.
b. In many cases, measuring instruments have the same potential as that for the (-) probe. Be sure to set the measuring instruments to the floating state.
c. If you have mistakenly connected the REFO1 to the GND, turn off the regulator or the power immediately.

• Before mounting and removing filters or leads for adjustment, be sure to turn off the regulator.

• For stable circuit operation, keep the mechanism operating for about one minute or more after the regulator is turned on.

• In the test mode, any software protections will not work. Avoid applying any mechanical or electrical shock to the mechanism during adjustment.

• The RFI and RFO signals with a wide frequency range are easy to oscillate. When observing the signals, insert a resistor of 1k ohms in series.

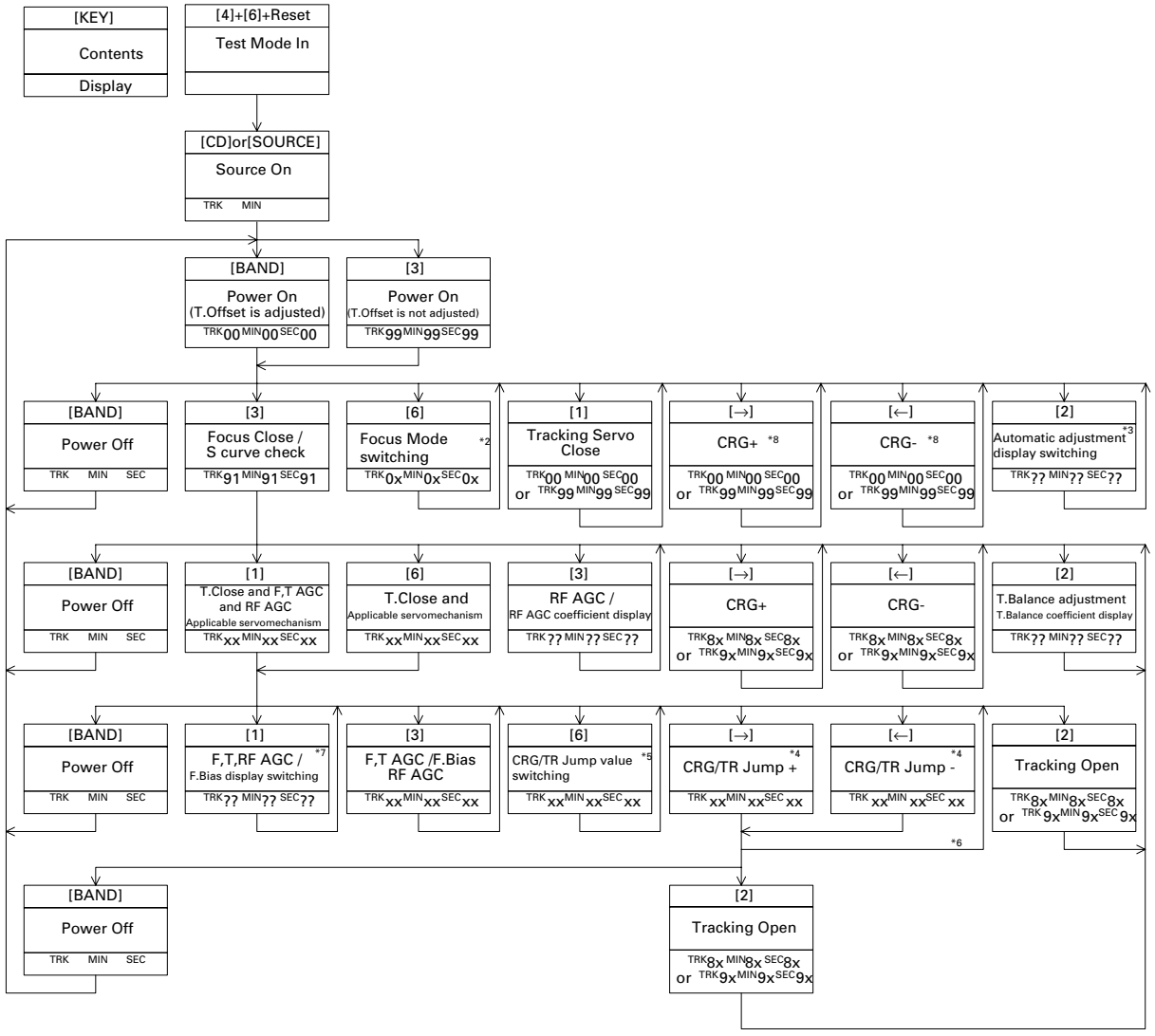
• The load and eject operation is not guarantied with the mechanism upside down. If the mechanism is blocked due to mistaken eject operation, reset the product or turn off and on the ACC to restore it.

2) Test mode

This mode is used to adjust the CD mechanism module.
• To enter the test mode.
While pressing the 4 and 6 keys at the same time, reset.
• To exit from the test mode.
Turn off the ACC and back up.

Notes:
a. During ejection, do not press any other keys than the EJECT key until the loaded disc is ejected.
b. If you have pressed the (→) key or (←) key during focus search, turn off the power immediately to protect the actuator from damage caused by the lens stuck.
c. For the TR jump modes except 100TR, the track jump operation will continue even if the key is released.
d. For the CRG move and 100TR jump modes, the tracking loop will be closed at the same time when the key is released.
e. When the power is turned off and on, the jump mode is reset to the single TR (91), the RF amp gain is set to 0dB, and the auto-adjustment values are reset to the default settings.

● Flow Chart



*1) TYP (TRK MIN SEC) → -12dB (TRK 12 MIN 12 SEC 12)

*2) Focus Close (TRK 00 MIN 00 SEC 00 / TRK 99 MIN 99 SEC 99) → S.Curve (TRK 01 MIN 01 SEC 01) → F EQ measurement setting (TRK 02 MIN 02 SEC 02)

*3) F.Offset Display → RF.Offset Display → T.Offset Display

*4) 1TR/32TR/100TR

*5) Single TR → 32TR → 100TR → CRG Move
9x(8x) : 91(81) 92(82) 93(83) 94(84)

*6) Only at the time of CRG Move or 100TR Jump

*7) TRK/MIN/SEC → F.AGC → T.AGC Gain → F.bias → RF AGC

*8) CRG motor voltage = 2[V]

[Key]	Operation Test Mode
[BAND]	Power On / Off
[→]	CRG + / TR Jump + (Direction of the external surface)
[←]	CRG - / TR Jump - (Direction of the internal surface)
[1]	CLS and AGC and Applicable servomechanism / AGC, AGC display switching
[2]	RF Gain switching / Offset adjustment display / T.Balance adjustment / T.Open
[3]	Close, S.Curve / Rough Servo and RF AGC / F, T, RF AGC
-	SPDL 1X / 2X switching (Double-speed compatibility only)
-	Gop measurement
[6]	Forcus Mode switching / Tracking Close / CRG, TR Jump switching

6.2 CHECKING THE GRATING AFTER CHANGING THE PICKUP UNIT

• **Note :**
The grating angle of the PU unit cannot be adjusted after the PU unit is changed. The PU unit in the CD mechanism module is adjusted on the production line to match the CD mechanism module and is thus the best adjusted PU unit for the CD mechanism module. Changing the PU unit is thus best considered as a last resort. However, if the PU unit must be changed, the grating should be checked using the procedure below.

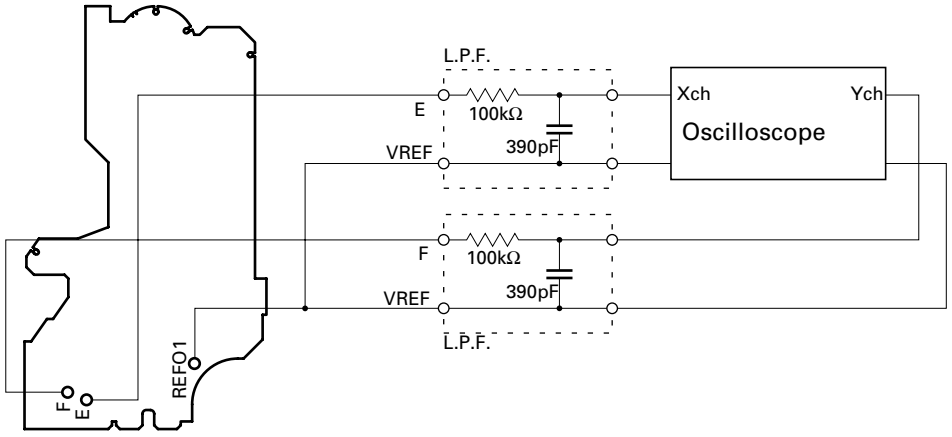
• **Purpose :**
To check that the grating is within an acceptable range when the PU unit is changed.

• **Symptoms of Mal-adjustment :**
If the grating is off by a large amount symptoms such as being unable to close tracking, being unable to perform track search operations, or taking a long time for track searching.

• **Method :**

• Measuring Equipment	• Oscilloscope, Two L.P.F.
• Measuring Points	• E, F, REFO1
• Disc	• ABEX TCD-782
• Mode	• TEST MODE

CD CORE UNIT(S10)



• **Checking Procedure**
1. In test mode, load the disc and switch the 3V regulator on.
2. Using the → and ← buttons, move the PU unit to the innermost track.
3. Press key 3 to close focus, the display should read "91". Press key 2 to implement the tracking balance adjustment the display should now read "81". Press key 3. The display will change, returning to "81" on the fourth press.
4. As shown in the diagram above, monitor the LPF outputs using the oscilloscope and check that the phase difference is within 75° . Refer to the photographs supplied to determine the phase angle.
5. If the phase difference is determined to be greater than 75° try changing the PU unit to see if there is any improvement. If, after trying this a number of times, the grating angle does not become less than 75° then the mechanism should be judged to be at fault.

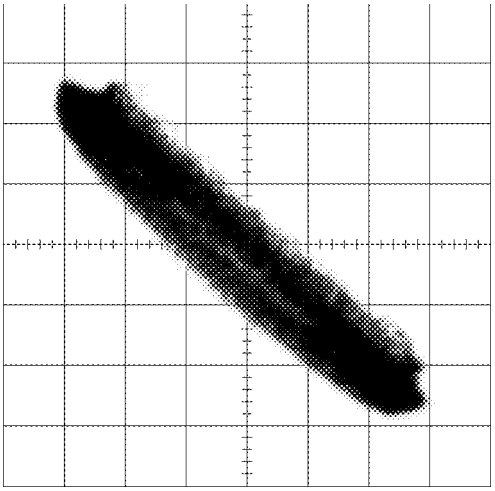
• **Note**
Because of eccentricity in the disc and a slight misalignment of the clamping center the grating waveform may be seen to "wobble" (the phase difference changes as the disc rotates). The angle specified above indicates the average angle.

• **Hint**
Reloading the disc changes the clamp position and may decrease the "wobble".

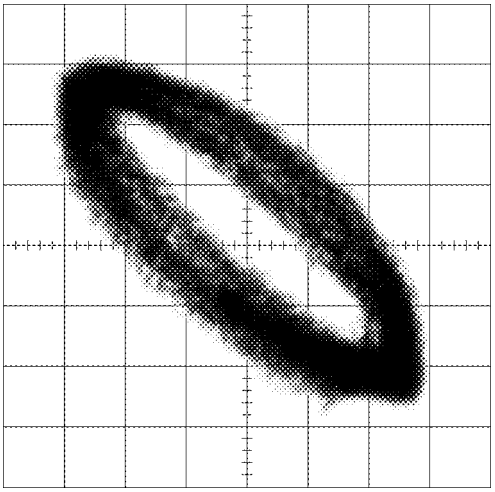
Grating waveform

Ech → Xch 20mV/div, AC
Fch → Ych 20mV/div, AC

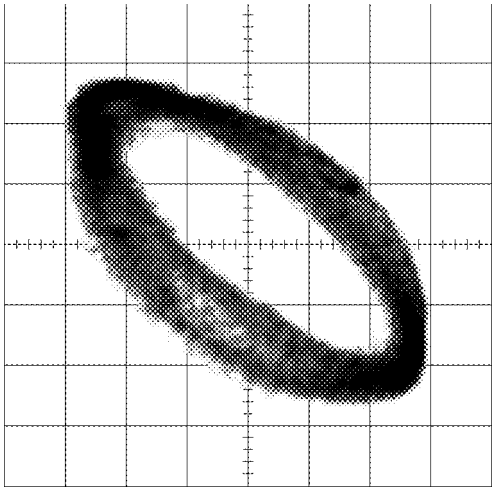
0°



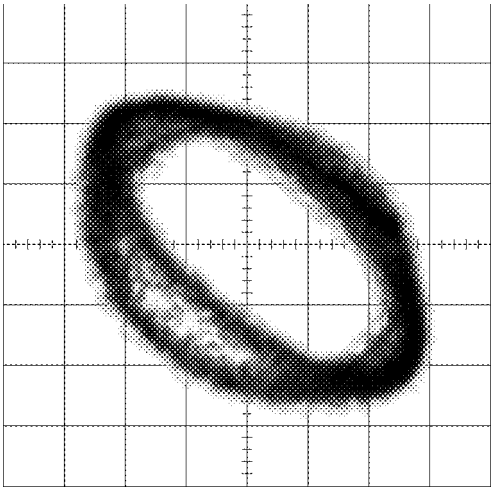
30°



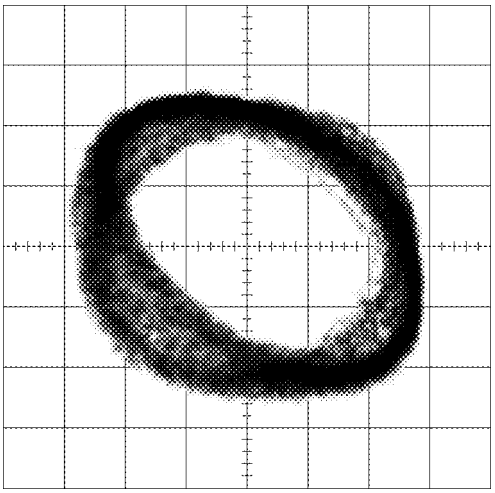
45°



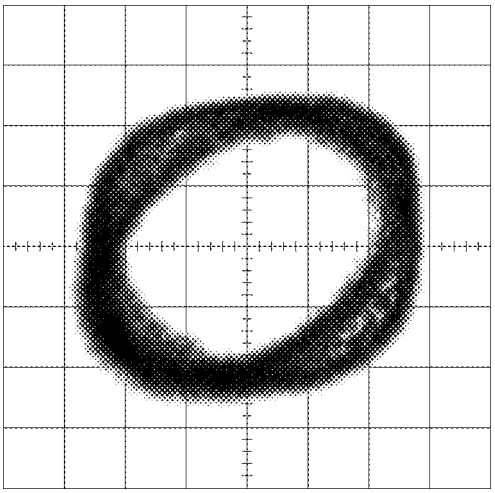
60°



75°



90°



6.3 ERROR MODE

● Error Messages

If a CD is not operative or stopped during operation due to an error, the error mode is turned on and cause(s) of the error is indicated with a corresponding number. This arrangement is intended at reducing nonsense calls from the users and also for facilitating trouble analysis and repair work in servicing.

(1) Basic Indication Method

1) When SERRORM is selected for the CSMOD (CD mode area for the system), error codes are written to DMIN (minutes display area) and DSEC (seconds display area). The same data is written to DMIN and DSEC. DTNO remains in blank as before.

2) Head unit display examples

Depending on display capability of LCD used, display will vary as shown below. xx contains the error number.

8-digit display	6-digit display	4-digit display
ERROR–xx	ERR–xx	E–xx

(2) Error Code List

Code	Class	Displayed error code	Description of the code and potential cause(s)
10	Electricity	Carriage Home NG SERVO LSI Communication Error	CRG can't be moved to inner diameter. CRG can't be moved from inner diameter. → Failure on home switch or CRG move mechanism. Communication error between microcomputer and SERVO LSI.
11	Electricity	Focus Servo NG	Focusing not available. → Stains on rear side of disc or excessive vibrations on REWRITABLE.
12	Electricity	Spindle Lock NG Subcode NG	Spindle not locked. Sub-code is strange (not readable). → Failure on spindle, stains or damages on disc, or excessive vibrations. A disc not containing CD-R data is found. Turned over disc are found, though rarely. CD signal error.
17	Electricity	Setup NG	AGC protection doesn't work. Focus can be easily lost. → Damages or stains on disc, or excessive vibrations on REWRITABLE.
30	Electricity	Search Time Out	Failed to reach target address. → CRG tracking error or damages on disc.
44	Electricity	ALL Skip	Skip setting for all track. (CD-R/RW)
50	Mechanism	CD On Mech Error	Mechanical error during CD ON. → Defective loading motor, mechanical lock and mechanical sensor.
A0	System	Power Supply NG	Power (VD) is ground faulted. → Failure on SW transistor or power supply (failure on connector).

Remarks: Mechanical errors are not displayed (because a CD is turned off in these errors).

Unreadable TOC does not constitute an error. An intended operation continues in this case.

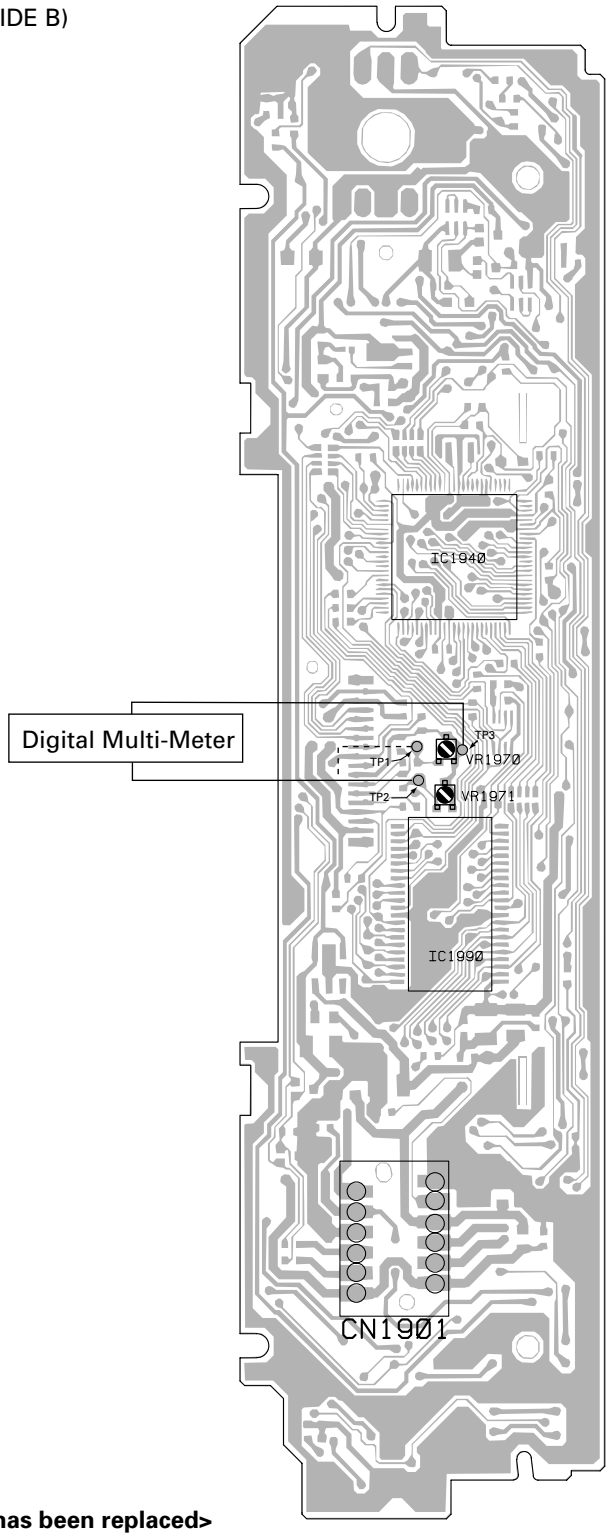
Upper digits of an error code are subdivided as shown below:

1x: Setup relevant errors, 3x: Search relevant errors, Ax: Other errors.

6.4 OEL UNIT ADJUSTMENT

● **Adjustment point**

KEYBOARD UNIT (SIDE B)



<When the OEL Unit has been replaced>

1. Use VR1970 to adjust the resistance between TP1 and TP3 to 4.5 kΩ.
2. Use VR1971 to adjust the resistance between TP2 and TP3 to 8 kΩ.

7. GENERAL INFORMATION

7.1 DIAGNOSIS

7.1.1 DISASSEMBLY

● **Removing the Case (not shown)**

1. Remove the Case.

● **Removing the CD Mechanism Module (Fig.1)**

1 Remove the four screws.

Disconnect the connector and then remove the CD Mechanism Module.

● **Removing the Grille Assy (Fig.1)**

2 Remove the two screws and then remove the Grille Assy.

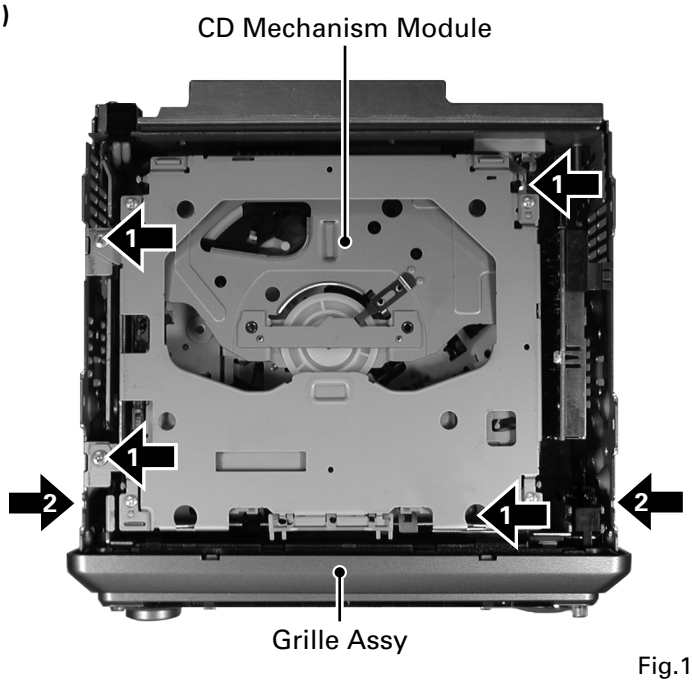


Fig.1

● **Removing the Tuner Amp Unit (Fig.2)**

1 Remove the screw.

2 Remove the three screws.

3 Straight the tabs at three locations indicated.

4 Remove the screw and then remove the Tuner Amp Unit.

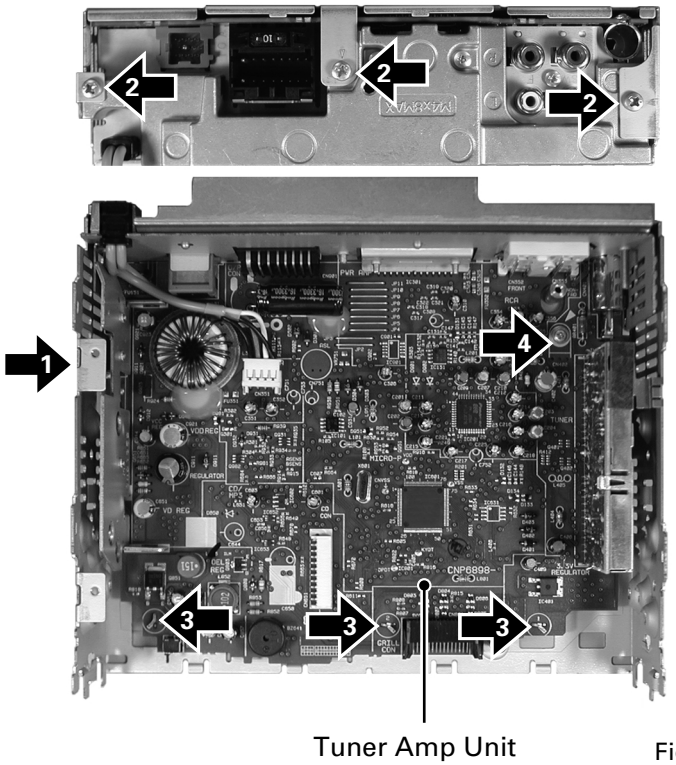
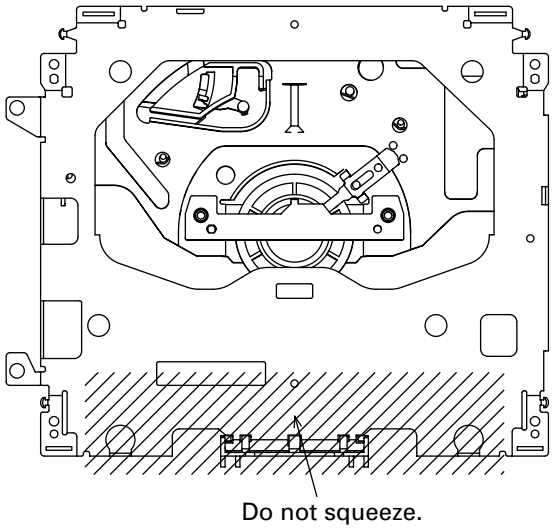


Fig.2

● How to hold the Mechanism Unit

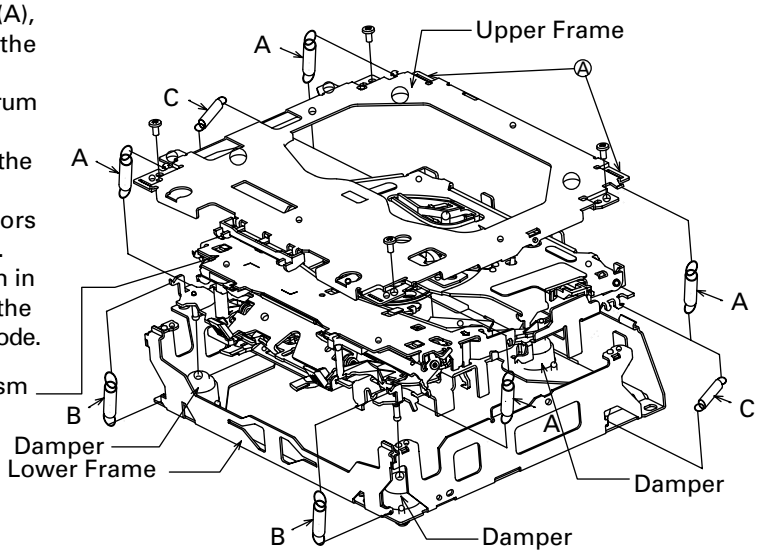
1. Hold the top and bottom frame.
2. Do not squeeze top frame's front portion too tight, because it is fragile.



● Removing the Upper and Lower Frames

1. With a disc clamped, remove the four springs (A), the two springs (B), the two springs (C), and the four screws.
2. To remove the upper frame, open it on the fulcrum A.
3. While lifting the carriage mechanism, remove the three dampers.
4. With the frames removed, insert the connectors coming from the main unit and eject the disc.

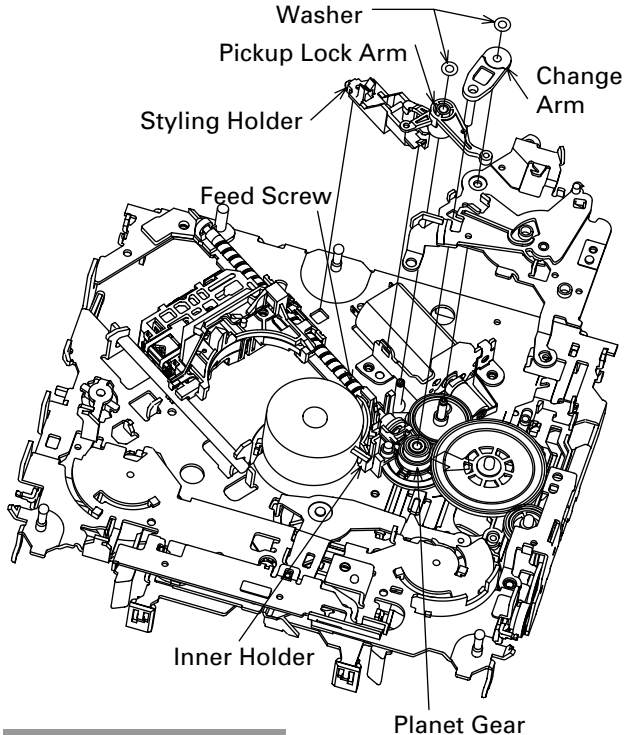
Caution: Before installing the carriage mechanism in the frames, be sure to apply some alcohol to the dampers and set the mechanism to the clamp mode.



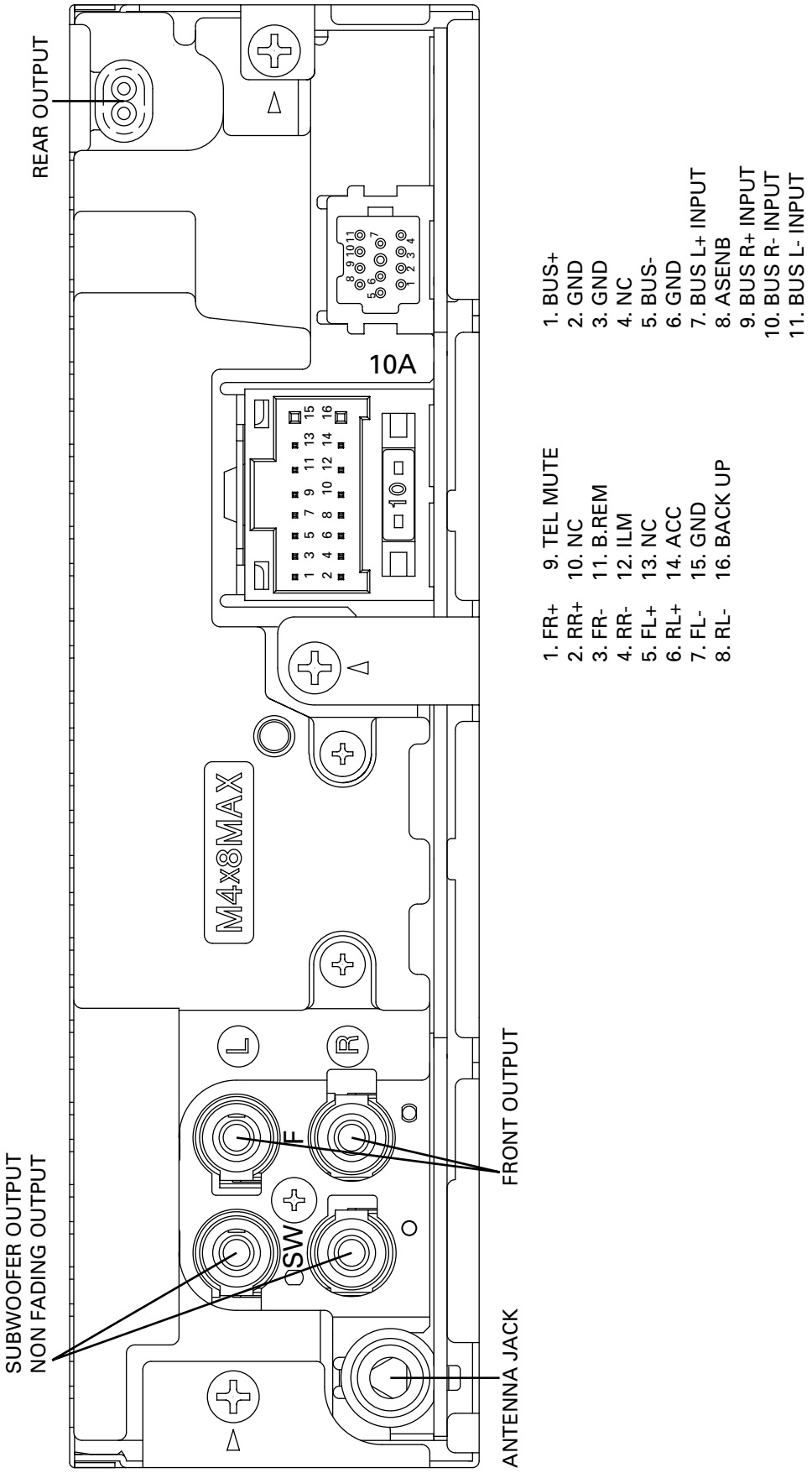
● Removing the Pickup Unit

1. Set the mechanism to the clamp mode.
2. Remove the lead wires from the inner holder.
3. Remove the two washers, styling holder, change arm, and pickup lock arm.
4. While releasing from the hook of the inner holder, lift the end of the feed screw.

Caution: In assembling, move the planet gear to the load/eject position before setting the feed screw in the inner holder.



7.1.2 CONNECTOR FUNCTION DESCRIPTION

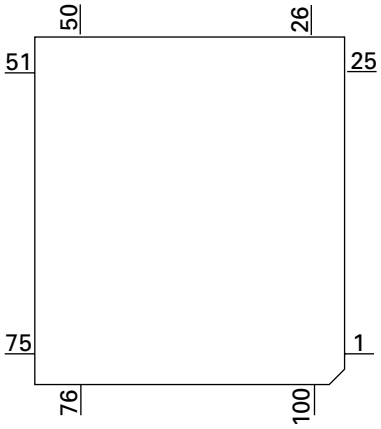


7.2 IC

● **Pin Functions (PD5809A)**

Pin No.	Pin Name	I/O	Format	Function and Operation
1-4	NC			Not used OPEN
5	REM	I		Remote control reception
6	BYTE	I		GND connection
7	CNVSS	I		GND connection
8, 9	NC			Not used OPEN
10	$\overline{\text{RESET}}$	I		Pull up
11	XOUT	O		Crystal oscillating element connection pin
12	VSS1			GND connection
13	XIN	I		Crystal oscillating element connection pin
14	VDD1			VDD connection
15	$\overline{\text{NMI}}$	I		Pull up
16-19	$\overline{\text{KD1-4}}$	I		Key data 1-4
20	CKC	O	C	Cathode driver pulse
21	NC			Not used OPEN
22	CKA	O	C	Anode driver pulse
23	NC			Not used OPEN
24	LS	O	C	Line synchronous signal
25	NC			Not used OPEN
26	CKD	O	C	Data transfer and driver clock
27	DPDT	I		Display data communication
28	KYDT	O	N	Key data communication
29	DA2	O	C	Display data MSB
30	NC			Not used
31	CLK1	I		UART1 clock input
32	ILMD	O	C	Dual illumination
33	DA1	O	C	Display data LSB
34	NC			Not used
35	CLK0	I		UART0 clock input
36	NC	O		Not used OPEN
37	$\overline{\text{RDY}}$	I		Not used Pull up
38	NC			Not used OPEN
39	$\overline{\text{HOLD}}$	I		Pull up
40	NC			OPEN
41	BCLK	O		Not used Pull up
42	$\overline{\text{RD}}$	O	C	Read strobe
43	NC			OPEN
44	$\overline{\text{WR}}$	O	C	Not used OPEN
45	$\overline{\text{CS3}}$	O	C	Not used OPEN
46	$\overline{\text{CS2}}$	O	C	Bank address
47	$\overline{\text{CS1}}$	O	C	Bank address
48	$\overline{\text{CS0}}$	O	C	External ROM chip select
49	A19	O	C	Address bus 19
50	NC	O	C	OPEN
51-59	A17-9	O	C	Address bus 17-9
60	VDD2			VDD connection
61	A8	O	C	Address bus 8
62	VSS2			GND connection
63-69	A7-1	O	C	Address bus 7-0
70	NC	O	C	OPEN
71-86	D15-0	I/O	C	Data bus 15-0
87-92	$\overline{\text{KS1-6}}$	I/O	C	key strobe
93	$\overline{\text{FLSTBY}}$	O	C	FLASH memory stand-by signal
94	AVSS			GND connection
95	$\overline{\text{FL12ON}}$	O	C	Not used OPEN
96	VREF			GND connection
97	AVCC			VCC connection
98	$\overline{\text{FLBUSY}}$	I		FLASH memory busy signal
99	NC			OPEN
100	FWRST			GND connection

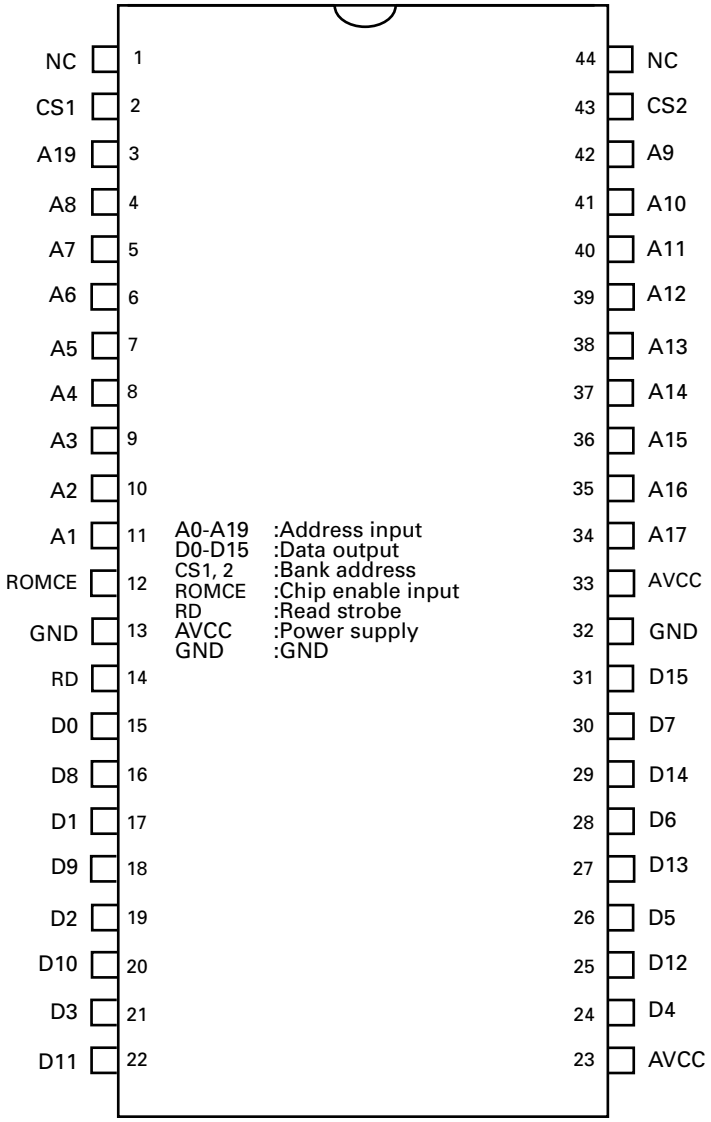
* PD5809A



Format	Meaning
C	CMOS
N	Nch open drain

IC's marked by * are MOS type.
Be careful in handling them because they are very liable to be damaged by electrostatic induction.

*PD8108A(DEH-P650)
*PD8107A(DEH-P6500, P6550)

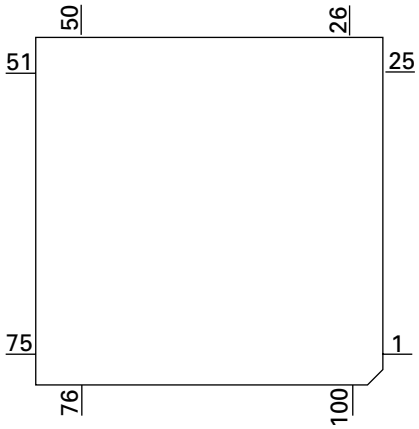


● Pin Functions(PD5807A)

Pin No.	Pin Name	I/O	Function and Operation
1	SYSPW	O	System power control output
2	NC	O	Not used
3	XSO	O	S10 : Serial data output
4	XSI	I	S10 : Serial data input
5	XSCK	O	S10 : Clock output for serial communication
6	BYTE	I	External data bus width change input
7	CNVSS		Processor mode change input
8	TELIN	I	TEL : Cellular mute input
9	HTELPW	O	Not used
10	RESET	I	Reset input
11	XOUT	O	Clock output
12	VSS		GND
13	XIN	I	Clock input
14	VCC		Power supply input
15	NC		Not used
16	$\overline{\text{RDSCK}}$		Not used
17	$\overline{\text{LDET}}$		Not used
18	INTQ		CD-TEXT PACK interruption
19	RX2		IPBUS : Input 2
20	OELPW	O	OEL power supply output
21	CLCONT	O	S10 : Driver control change output
22	PEE	O	PEE sound output
23	CDLOEJ	O	S10 : Road/eject output
24	BRST	O	Not used
25	BRXEN	I/O	Not used
26	NC	I	Not used
27	RX	I	IPBUS : Input
28	TX	O	IPBUS : Output
29	BSO		Not used
30	BSI		Not used
31	BSCK		Not used
32	VDCONT	O	S10 : VD power supply control output
33	DPDT	O	GRILLE : Data output
34	KYDT	I	GRILLE : Data input
35, 36	ROT1, 0	I	Rotary encoder pulse input1, 0
37	PCL	O	Output for clock adjustment
38	SWVDD	O	GRILLE : Chip enable output
39	$\overline{\text{DSENS}}$	I	Detach sense input
40	FLPILM	O	Illumination output inside flap
41	ILMPW	O	Illumination output
42	EJTIN	I	Eject key input
43	$\overline{\text{DRST}}$		Not used
44	$\overline{\text{RDS57K}}$	I	Not used
45	RDSLK	I	Not used
46	RDSDATA	I	Not used
47-54	NC		Not used
55	RECEIVE		Not used
56	CONT	O	S10 : Servo driver control output
57	EMUTE	O	EVOL : Mute output
58	$\overline{\text{XSTB}}$	O	S10 : Data strobe signal output
59	XA0	O	S10 : Command/parameter discernment signal output
60	VCC		Power supply input
61	$\overline{\text{XRST}}$	O	S10 : Reset signal output
62	VSS		GND
63-65	NC		Not used
66	CLAMPSW	I	Clamp signal input
67	DALMON	O	For consumption current reduction
68	NC		Not used
69	$\overline{\text{TUNPCE2}}$	O	TUNER : Chip enable output(EEPROM)
70	TUNPCE	O	TUNER : Chip enable output(PLL)
71	$\overline{\text{ROMCS}}$	O	ROM correction : Chip select

Pin No.	Pin Name	I/O	Function and Operation
72	$\overline{\text{ASENS}}$	I	ACC sense
73	$\overline{\text{BSENS}}$		Back up sense
74	ROMCK	O	ROM correction : Clock output
75	ROMDATA	I/O	ROM correction : Data input/output
76	VST	O	EVOL : Strobe output
77	VDT	O	EVOL : Data output
78	$\overline{\text{VCK}}$	O	EVOL : Clock output
79	IPPW	O	IPBUS : Driver power supply control output
80	ASENBO	O	IPBUS : Slave ACC sense output
81	$\overline{\text{ISENS}}$	I	Illumination sense input
82	MODEL1	I	Model select input 1
83	MODEL2		Not used
84	ANTPW	O	Not used
85	MUTE	O	MUTE output
86	TESTIN	I	Test program input
87	DSCSNS	I	S10 : Disc position detection input
88	VDSENS	I	S10 : VD power supply short sense input
89	TEMP	I	S10 : Temperature sense input
90	LVLINR	I	Level indicator Rch input
91	$\overline{\text{CSENS}}$	I	Flap opening-and-closing sense input
92	LVLINL	I	Level indicator Lch input
93	ASLIN	I	ASL signal input (ES model)
94	AVSS		AD translation power supply input terminal
95	SL	I	TUNER : Signal level input
96	VREF		AD translation reference voltage
97	AVCC		AD translation power supply input terminal
98	TUNPDI	I	TUNER : PLL communication
99	TUNPDO		TUNER : Data output(PLL)
100	TUNPCK		TUNER : Clock output(PLL)

* PD5807A



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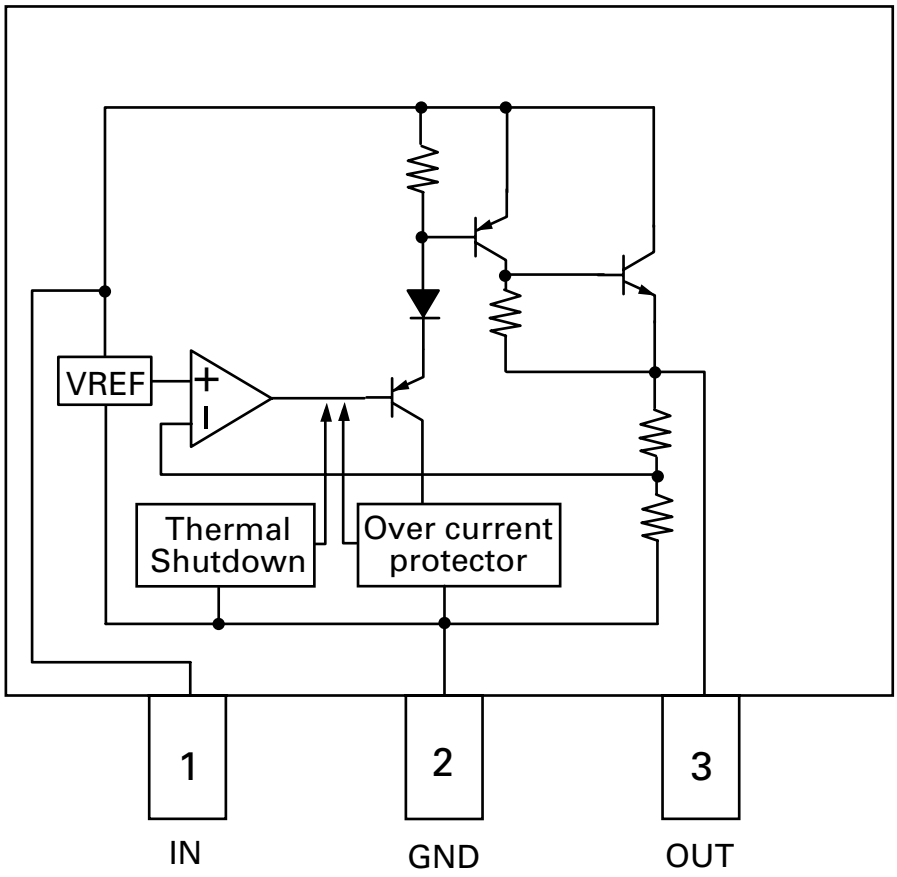

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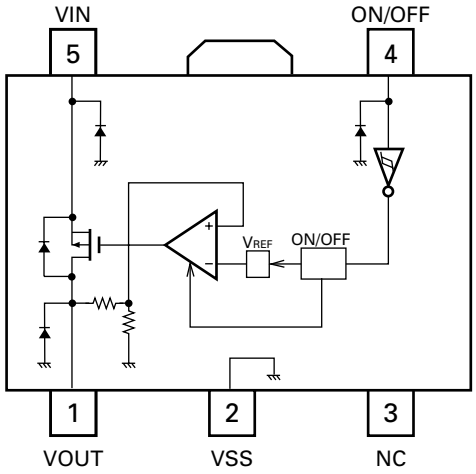
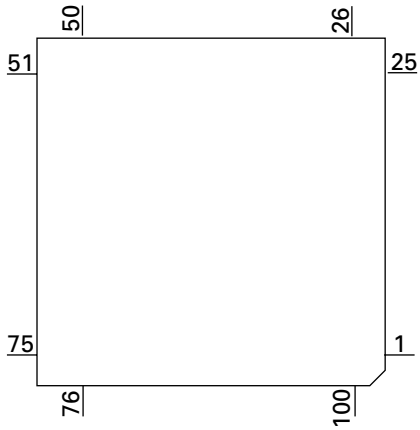


● Pin Functions(UPD63712GC)

Pin No.	Pin Name	I/O	Function and Operation
1	LD	O	Output of LD
2	PD	I	Input of PD
3	PN	I	Assignment of pickup polarity
4	AVDD		Power supply for the analog system
5	DGND		Ground for digital circuits
6	RFOK	O	Output of RFOK
7	INTQ	O	Interruption signals to the external microcomputer
8	$\overline{RST}$	I	Input of reset
9	A0	I	Command/Parameter discrimination signal input
10	$\overline{STB}$	I	Data strobe signal input
11	$\overline{SCK}$	I	Serial data clock input
12	SO	O	Serial data output
13	SI	I	Serial data input
14	DVDD		Power supply for digital circuits
15	DAVDD		Power supply for DAC
16	ROUT	O	Output of audio for the right channel
17	DAGND		GND for DAC
18	REGC		Connected to the capacitor for band gap
19	DAGND		GND for DAC
20	LOUT	O	Output of audio for the left channel
21	DAVDD		Power supply for DAC
22	XVDD		Power supply for the crystal oscillator
23	$\overline{XTAL}$	O	Connected to the crystal oscillator
24	XTAL	I	Connected to the crystal oscillator
25	XGND		Ground for the crystal oscillator
26	DVDD		Power supply for digital circuits
27	C1D1	O	Information on error correction
28	C1D2	O	Information on error correction
29	C2D1	O	Information on error correction
30	C2D2	O	Information on error correction
31	C2D3	O	Information on error correction
32	LOCK	O	Output of LOCK
33	MIRR	O	MIRR signal
34	HOLD	O	HOLD signal
35	PLCK	O	Output of PLCK
36	C16M	O	Output of 16.9344MHz
37	DGND		Ground for digital circuits
38	TX	O	DAI output
39	EMPH	O	Pre-emphasis information output
40	FLAG	O	The flag for which output sound data cannot be corrected is outputted
41	DVDD		Power supply for digital circuits
42	LIMIT	I	Signal is inputted when the register can be read
43	$\overline{XTALEN}$	I	Permission to oscillate
44	DGND		Ground for digital circuits
45	DIN	I	Input of audio data
46	DOUT	O	Output of audio data
47	SCKIN	I	Clock input for audio data
48	SCKO	O	Clock output for audio data
49	LRCKIN	I	Input of LRCK for audio data
50	LRCK	O	Output LRCK for audio data
51	DVDD		Power supply for digital circuits
52	FD+	O	Output of focus drive PWM
53	FD-	O	Output of focus drive PWM
54	TD+	O	Output of tracking drive PWM
55	TD-	O	Output of tracking drive PWM
56	SD+	O	Output of thread drive PWM
57	SD-	O	Output of thread drive PWM
58	MD+	O	Output of spindle drive PWM
59	MD-	O	Output of spindle drive PWM
60	DGND		Ground for digital circuits

Pin No.	Pin Name	I/O	Function and Operation
61	TESTEN	I	Connected to GND
62-66	TEST4-0	I	Connected to GND
67	ADGND		GND for DAC
68	EFM	O	Output of EFM signals
69	ASY	I	Input of asymmetry
70	ADVDD		Power supply for DAC
71	RFI	I	Input of RF
72, 73	EQ2, 1		Equalizer 2, 1
74	RF-	I	Reversal input of RF
75	RF2-	I	Reversal input of RF2
76	AGCO	O	Output of RF
77	AGCI	I	Input of AGC
78	RFO	O	Output of RF
79	ATEST	O	Analog tests
80	C3T		Connection to the capacitor for detecting 3T
81	AGND		Ground for the analog system
82	A	I	Input of A
83	C	I	Input of C
84	B	I	Input of B
85	D	I	Input of D
86	F	I	Input of F
87	E	I	Input of E
88	VREFIN	I	Photo-detector input bias voltage
89	AVDD		Power supply for the analog system
90	REFOUT	O	Output of reference voltage
91	REFC		Connected to the capacitor for output of REFOUT
92	FE-	I	Reversal input of FE
93	FEO	O	Output of FE
94	ADCIN	I	TEST
95	TE-	I	Reversal input of TE
96	TEO	O	Output of TE
97	TE2	O	TE2
98	TEC	I	TEC
99	AGND		Ground for the analog system
100	PWMSW	I	Servo PWM mode switching

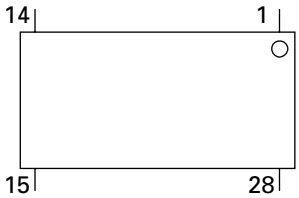
* UPD63712GC



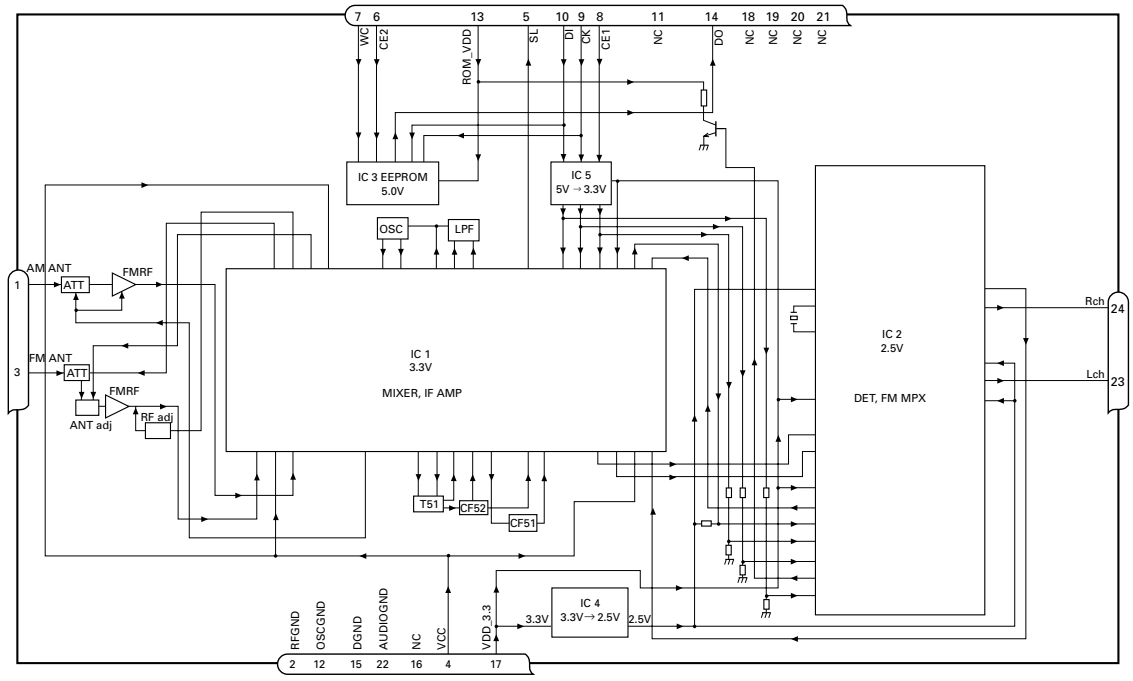
● Pin Functions(BA5996FP)

Pin No.	Pin Name	Function and Operation
1	VR	Input pin for reference voltage
2	OPIN2(+)	Input pin for non-inverting input for CH2 preamplifier
3	OPIN2(-)	Input pin for inverting input for CH2 preamplifier
4	OPOUT2	Output pin for CH2 preamplifier
5	OPIN1(+)	Input pin for non-inverting input for CH1 preamplifier
6	OPIN1(-)	Input pin for inverting input from CH1 preamplifier
7	OPOUT1	Output pin for CH1 preamplifier
8	GND	Ground pin
9	MUTE	Mute control pin
10	POWVCC1	Power supply pin for CH1, CH2, and CH3 at "Power" stage
11	VO1(-)	Driver CH1 - Negative output
12	VO1(+)	Driver CH2 - Positive output
13	VO2(-)	Driver CH2 - Negative output
14	VO2(+)	Driver CH2 - Positive output
15	VO3(+)	Driver CH2 - Positive output
16	VO3(-)	Driver CH2 - Negative output
17	VO4(+)	Driver CH4 - Positive output
18	VO4(-)	Driver CH4 - Negative output
19	POWVCC2	Power supply pin for CH4 at "Power" stage
20	GND	Ground pin
21	CNT	Control pin
22	LDIN	Loading input
23	OPOUTSL	Output pin for preamplifier for thread
24	OPINLSL	Input pin for preamplifier for thread
25	OPOUT3	CH3 preamplifier output pin
26	OPIN3(-)	Input pin for inverting input for CH3 preamplifier
27	OPIN3(+)	Input pin for non-inverting input for CH3 preamplifier
28	PREVCC	PreVcc

BA5996FP

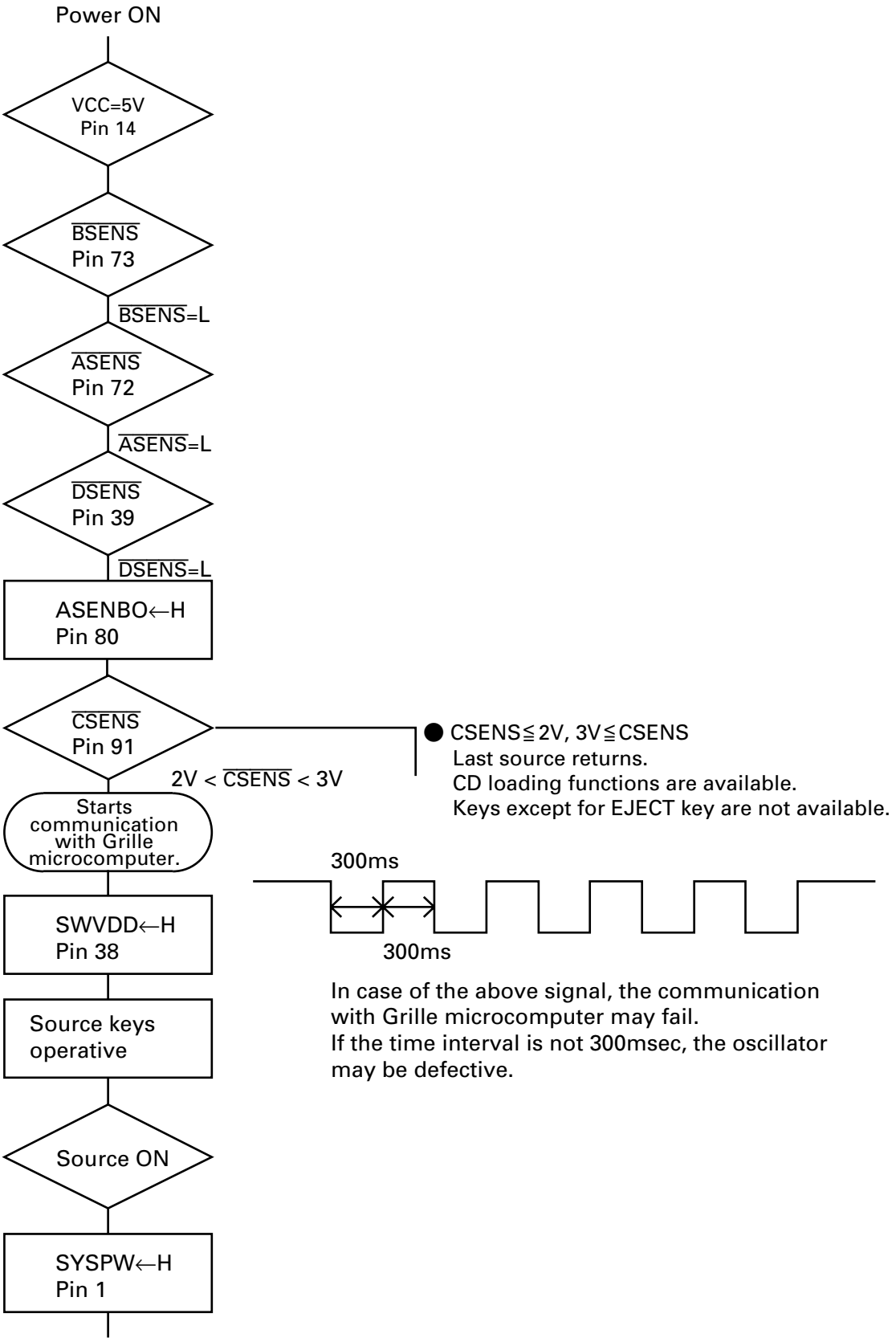


● FM/AM Tuner Unit



No.	Symbol	I/O	Explain	
1	AMANT	I	AM antenna input	AM antenna input high impedance AMANT pin is connected with an all antenna by way of 4.7μH. (LAU type inductor) A series circuit including an inductor and a resistor is connected with RF ground for the countermeasure against the ham of power transmission line.
2	RFGND		RF ground	Ground of antenna block
3	FMANT	I	FM antenna input	Input of FM antenna 75Ω Surge absorber(DSP-201M-S00B) is necessary.
4	VCC		power supply	The power supply for analog block. D.C 8.4V ± 0.3V
5	SL	O	signal level	Output of FM/AM signals level
6	CE2	I	chip enable-2	Chip enable for EEPROM "Low" active
7	WC	I	write control	You can write EEPROM, when EEPROM write control is "Low". Ordinary non connection
8	CE1	I	chip enable-1	Chip enable for AF•RF "High" active
9	CK	I	clock	Clock
10	DI	I	data in	Data input
11	NC		non connection	Not used
12	OSCGND		osc ground	Ground of oscillator block
13	ROM_VDD		power supply	Power supply for EEPROM pin 13 is connected with a power supply of micro computer.
14	DO	O	data out	Data output
15	DGND		digital ground	Ground of digital block
16	NC		non connection	Not used
17	VDD_3.3		power supply	The power supply for digital block. 3.3V ± 0.2V
18	NC		non connection	Not used
19	NC		non connection	Not used
20	NC		non connection	Not used
21	NC		non connection	Not used
22	AUDIOGND		audio ground	Ground of audio block
23	L ch	O	L channel output	FM stereo "L-ch" signal output or AM audio output
24	R ch	O	R channel output	FM stereo "R-ch" signal output or AM audio output

7.3 OPERATIONAL FLOW CHART



Completes power-on operation.
(After that, proceed to each source operation)

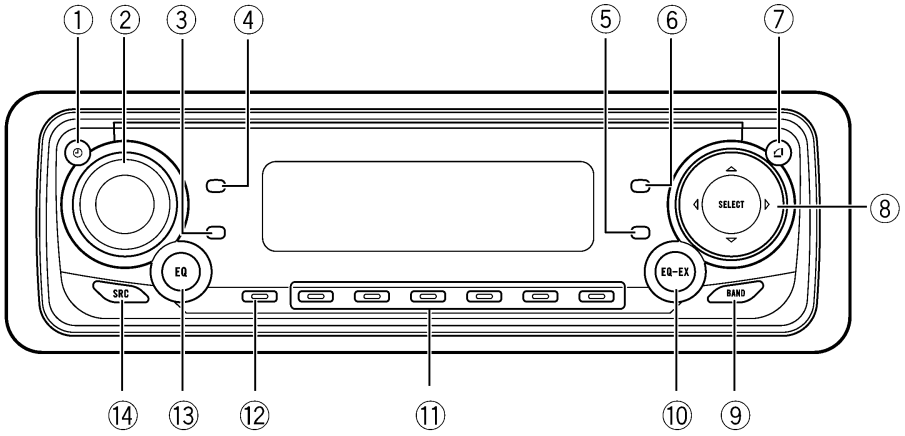
7.4 CLEANING

Before shipping out the product, be sure to clean the following portions by using the prescribed cleaning tools:

Portions to be cleaned	Cleaning tools
CD pickup lenses	Cleaning liquid : GEM1004 Cleaning paper : GED-008

8. OPERATIONS

What's What



Head unit

① **CLOCK button**
Press to change to the clock display.

② **VOLUME**
When you press **VOLUME**, it extends outward so that it becomes easier to turn. To retract **VOLUME**, press it again. Rotate to increase or decrease the volume.

③ **DISPLAY button**
Press to select different displays.

④ **PAUSE button**
Press to turn pause on or off.

⑤ **FUNCTION button**
Press to select functions.

⑥ **AUDIO button**
Press to select various sound quality controls.

⑦ **OPEN button**
Press to open the front panel.

⑧ **▲/▼/◄/► buttons**
Press to do manual seek tuning, fast forward, reverse and track search controls. Also used for controlling functions.

⑨ **BAND button**
Press to select among three FM and one AM bands and cancel the control mode of functions.

⑩ **EQ-EX button**
Press and hold to switch between EQ-EX and SFEQ functions. Press to operate each function.

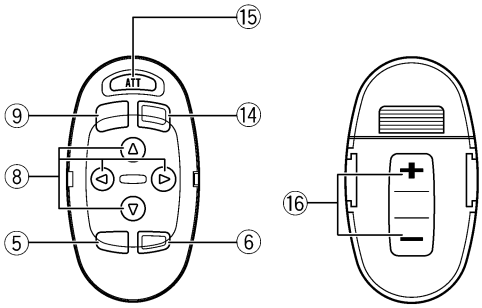
⑪ **1–6 buttons**
Press for preset tuning and disc number search when using a multi-CD player.

⑫ **ENTERTAINMENT button**
Press to change to the entertainment display.

⑬ **EQ button**
Press to select various equalizer curves.

What's What

● DEH-P650/XN/UC



⑭ **SOURCE button**
This unit is turned on by selecting a source. Press to cycle through all of the available sources. ▣

Remote control

Operation is the same as when using the button on the head unit. See the explanation of the head unit about the operation of each button with the exception of **ATT**, which is explained below.

⑮ **ATT button**
Press to quickly lower the volume level, by about 90%. Press once more to return to the original volume level.

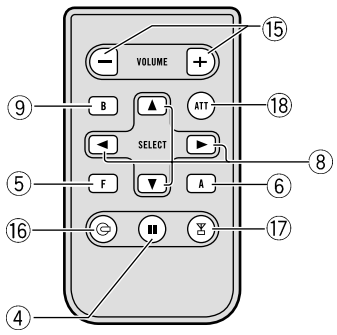
⑯ **VOLUME button**
Press to increase or decrease the volume.

Note

If you press **FUNCTION** on the remote control while pressing **BAND** on it, the remote control will not function properly. To cancel this setting, press **AUDIO** on the remote control while pressing **BAND** on it to return to the previous setting. ▣

What's What

● DEH-P6500/XN/UC, P6550/XN/ES



⑭ **SOURCE button**
This unit is turned on by selecting a source. Press to cycle through all of the available sources. ▣

Remote control

Operation is the same as when using the button on the head unit.

⑮ **VOLUME button**
Press to increase or decrease the volume.

⑯ **CD button**
Press to select the built-in or multi-CD player as the source.

⑰ **TUNER button**
Press to select the tuner as the source.

⑱ **ATT button**
Press to quickly lower the volume level, by about 90%. Press once more to return to the original volume level. ▣

Turning the unit on

● **Press SOURCE to turn the unit on.**
When you select a source the unit is turned on. ▣

Selecting a source

You can select a source you want to listen to. To switch to the built-in CD player, load a disc in this unit .

● **Press SOURCE to select a source.**
Press **SOURCE** repeatedly to switch between the following sources:
XM tuner—Tuner—Television—DVD player/Multi-DVD player—Built-in CD player—Multi-CD player—External unit 1—External unit 2—AUX

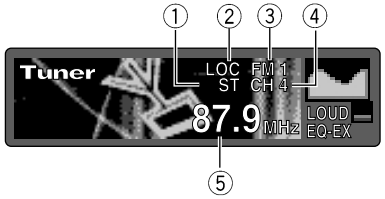
Notes

- In the following cases, the sound source will not change:
  - — When a unit corresponding to each source is not connected to this unit.
  - — When no disc is set in this unit.
  - — When no disc is set in the DVD player.
  - — When no magazine is set in the multi-CD player.
  - — When no magazine is set in the multi-DVD player.
  - — When the AUX (auxiliary input) is set to off
- External unit refers to a Pioneer product (such as one available in the future) that, although incompatible as a source, enables control of basic functions by this unit. Two external units can be controlled by this unit. When two external units are connected, the allocation of them to external unit 1 or external unit 2 is automatically set by this unit.
- When this unit's blue/white lead is connected to the car's auto-antenna relay control terminal, the car's antenna extends when this unit's source is turned on. To retract the antenna, turn the source off. ▣

Turning the unit off

● **Press SOURCE and hold until the unit turns off.** ▣

Listening to the radio



These are the basic steps necessary to operate the radio.

① **Stereo (ST) indicator**
Shows that the frequency selected is being broadcast in stereo.

② **LOC indicator**
Shows when local seek tuning is on.

③ **Band indicator**
Shows which band the radio is tuned to, AM or FM.

④ **Preset number indicator**
Shows what preset has been selected.

⑤ **Frequency indicator**
Shows to which frequency the tuner is tuned.

1 Press SOURCE to select the tuner.
Press **SOURCE** until you see **Tuner** displayed.

2 Use VOLUME to adjust the sound level.
Rotate to increase or decrease the volume.

3 Press BAND to select a band.
Press **BAND** until the desired band is displayed, **FM1**, **FM2**, **FM3** for FM or **AM**.

4 To perform manual tuning, press ◄ or ► with quick presses.
The frequencies move up or down step by step.

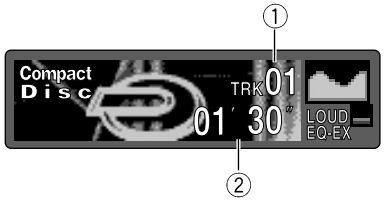
5 To perform seek tuning, press and hold ◄ or ► for about one second and release.
The tuner will scan the frequencies until a broadcast strong enough for good reception is found.

- You can cancel seek tuning by pressing either ◄ or ► with a quick press.
- If you press and hold ◄ or ► you can skip broadcasting stations. Seek tuning starts as soon as you release the buttons.

Note

When the frequency selected is being broadcast in stereo the stereo (**ST**) indicator will light. ▣

Playing a CD



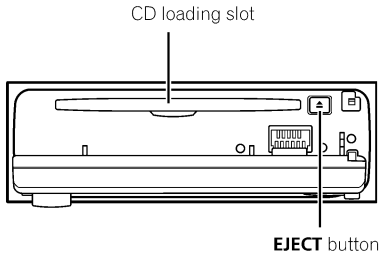
These are the basic steps necessary to play a CD with your built-in CD player.

① **Track number indicator**
Shows the track currently playing.

② **Play time indicator**
Shows the elapsed playing time of the current track.

1 Press OPEN to open the front panel.
CD loading slot appears.
■ After a CD has been inserted, press **SOURCE** to select the built-in CD player.

2 Insert a CD into the CD loading slot.
Playback will automatically start.



■ You can eject a CD by pressing **EJECT**.
■ To avoid a malfunction, make sure that no metal object comes into contact with the terminals when the front panel is open.

3 Close the front panel.

4 Use VOLUME to adjust the sound level.
Rotate to increase or decrease the volume.

5 To perform fast forward or reverse, press and hold ◄ or ►.

6 To skip back or forward to another track, press ◄ or ►.
Pressing ► skips to the start of the next track. Pressing ◄ once skips to the start of the current track. Pressing again will skip to the previous track.

Notes

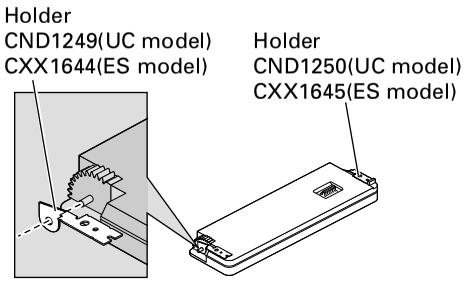
- The built-in CD player plays one, standard, 12-cm or 8-cm (single) CD at a time. Do not use an adapter when playing 8-cm CDs.
- Do not insert anything other than a CD into the CD loading slot.
- If you cannot insert a disc completely or if after you insert a disc the disc does not play, check that the label side of the disc is up. Press **EJECT** to eject the disc, and check the disc for damage before inserting the disc again.
- If the built-in CD player does not operate properly, an error message such as **ERROR-11** may be displayed.

- When a CD TEXT disc is inserted, the disc and track titles begin to scroll to the left automatically. ■

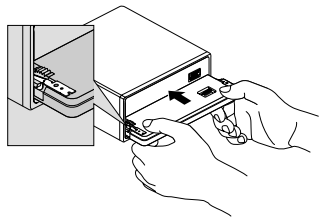
Fixing the front panel

If you do not operate the removing and attaching the front panel function, use the supplied fixing screws and holders to fix the front panel to this unit.

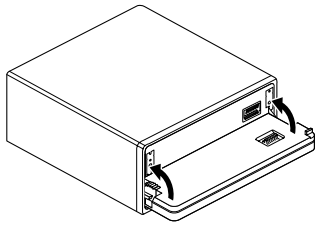
1. Attach the holders to both sides of the front panel.



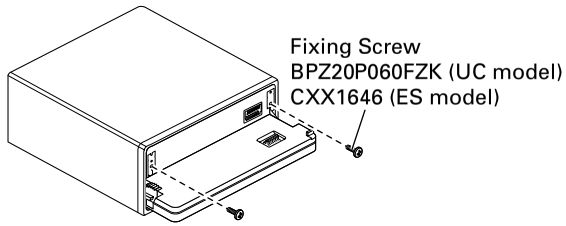
2. Replace the front panel to the unit.

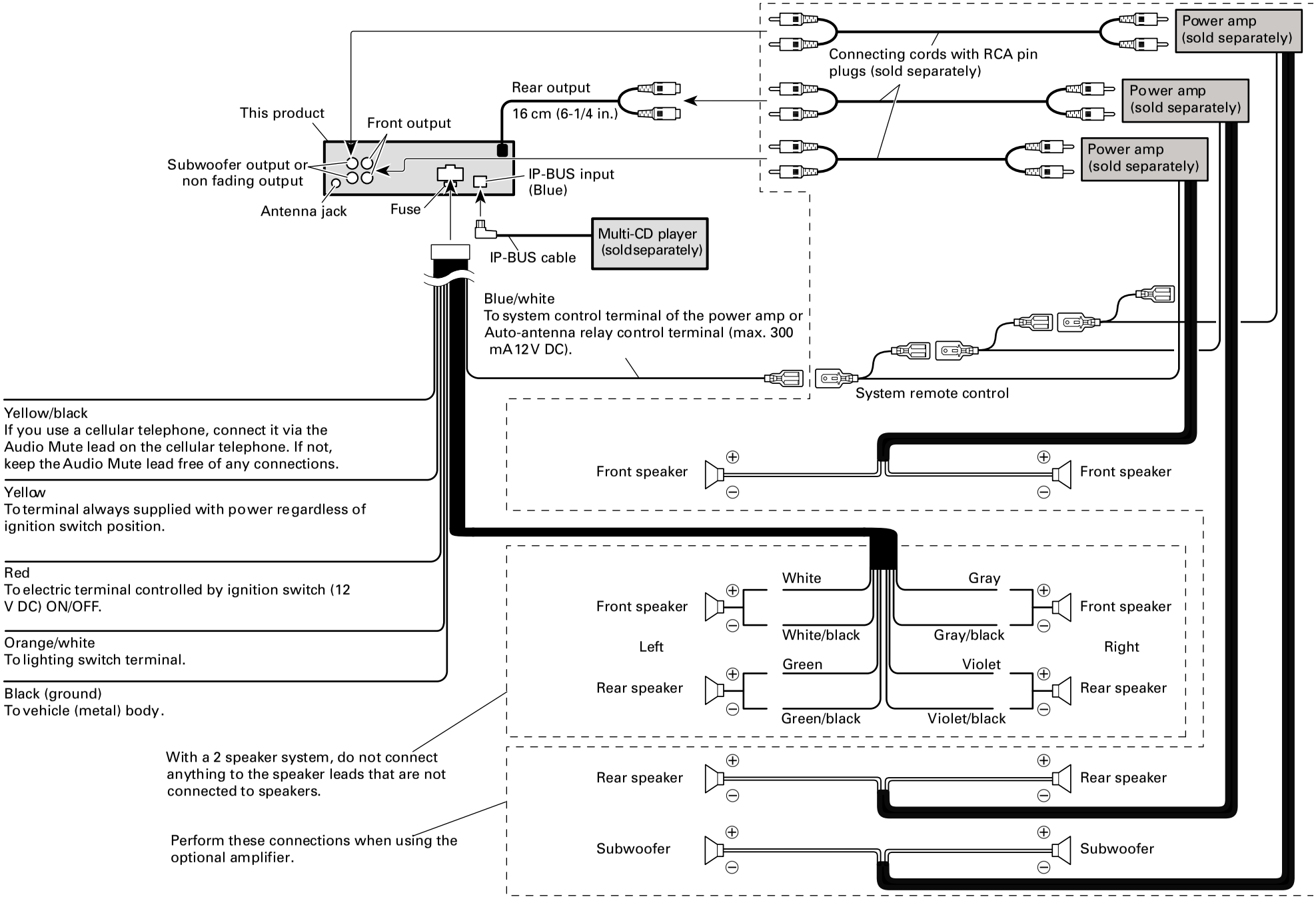


3. Flip the holders into upright positions.



4. Fix the front panel to the unit using fixing screws.




Power amp (sold separately)
Connecting cords with RCA pin plugs (sold separately)
Power amp (sold separately)
Power amp (sold separately)
Rear output
16 cm (6-1/4 in.)
This product
Front output
Subwoofer output or non fading output
Antenna jack
Fuse
IP-BUS input (Blue)
IP-BUS cable
Multi-CD player (sold separately)
Blue/white
To system control terminal of the power amp or Auto-antenna relay control terminal (max. 300 mA 12 V DC).
System remote control
Yellow/black
If you use a cellular telephone, connect it via the Audio Mute lead on the cellular telephone. If not, keep the Audio Mute lead free of any connections.
Yellow
To terminal always supplied with power regardless of ignition switch position.
Red
To electric terminal controlled by ignition switch (12 V DC) ON/OFF.
Orange/white
To lighting switch terminal.
Black (ground)
To vehicle (metal) body.
Front speaker
Front speaker
White
White/black
Gray
Gray/black
Front speaker
Front speaker
Left
Right
Rear speaker
Rear speaker
Green
Green/black
Violet
Violet/black
Rear speaker
Rear speaker
With a 2 speaker system, do not connect anything to the speaker leads that are not connected to speakers.
Subwoofer
Subwoofer
Perform these connections when using the optional amplifier.